

<211> 210  
 <212> PRT  
 <213> Homo sapiens

<400> 4268

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Lys Arg Cys Glu Ser Cys Ser Gln Lys Leu Glu Arg Glu Asn Asn His
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Cys Asn Ile Ser His Ser Ile Ile Leu Asn Ser Glu Asp Gly Glu Ile
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      85              90              95
His Phe Arg Asn Asp Thr Asn Thr Gln Ser Phe Tyr His Glu Lys Trp
      100             105             110
Ile Tyr Val His Lys Glu Ser Thr Lys Glu Arg His Gly Tyr Cys Thr
      115             120             125
Leu Gly Glu Thr Phe Asn Arg Leu Asp Phe Ser Ser Ala Ile Gln Asp
      130             135             140
Ile Arg Arg Phe Asn Tyr Val Val Lys Leu Leu Gln Leu Ile Ala Lys
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<210> 4269  
 <211> 5748  
 <212> DNA  
 <213> Homo sapiens

<400> 4269

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<210> 4270

<211> 1084

<212> PRT

<213> Homo sapiens

<400> 4270

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Pro	Val	Tyr	Cys	Leu	Cys	Arg	Leu	Pro	Tyr	Asp	Val	Thr	Arg	Phe	Met
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Thr	Leu	Phe	Glu	Cys	Trp	Ser	Ser	Ser	Ser	Asn	Gln	Asn	Glu	Met	Phe		
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Asp	Leu	Phe	Arg	Phe	Pro	Asn	Phe	Glu	Thr	Ile	Cys	Trp	Tyr	Val	Gly		
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Glu Phe Asp Ile Glu Glu Asp Tyr Thr Thr Asp Glu Asp Met Val Glu
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Gly Val Glu Gly Lys Leu Gly Asn Gly Ser Gly Ala Gly Gly Ile Leu
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Met Leu Cys Met Ala Asn Leu Gln Ser Ser Ser Ser Ser Pro Ala Thr
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Ser Ser Leu Gln Ala Trp Trp Thr Gly Gly Gln Asp Arg Ser Ser Gly
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Ser Ser Ser Ser Gly Leu Gly Thr Val Ser Asn Ser Pro Ala Ser Gln
        820                825                830
Arg Thr Pro Gly Lys Arg Pro Ile Lys Arg Pro Ala Tyr Trp Arg Thr
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Lys Arg Pro Lys Lys Gly Leu Ala Thr Ala Lys Gln Arg Leu Gly Arg
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&lt;210&gt; 4271

&lt;211&gt; 588

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4271

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&lt;210&gt; 4272

&lt;211&gt; 134

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4272

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Asn Asn Phe Ser Glu Leu Phe His Leu Leu Ser Ser Arg Asn Cys Lys
35           40           45
Thr Arg Asn Leu Val Met Lys Leu Leu Leu Asn Met Ser Glu Asn Pro
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Thr Ala Ala Arg Asp Met Ile Asn Met Lys Ala Leu Ala Ala Leu Lys
65           70           75           80
Leu Ile Phe Asn His Lys Glu Ala Lys Ala Asn Leu Val Ser Gly Val
85           90           95
Ala Ile Phe Ile Asn Ile Lys Glu His Ile Arg Lys Gly Ser Ile Val
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&lt;210&gt; 4273

&lt;211&gt; 2081

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4273

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 1680  
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 1920  
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 1980  
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 2081

<210> 4274

<211> 235

<212> PRT

<213> Homo sapiens

<400> 4274

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			20					25				30			
Glu	Glu	Ser	Ile	Arg	Ala	His	Val	Met	Ala	Ser	His	His	Ser	Lys	Arg
			35				40					45			
Arg	Gly	Arg	Ala	Ser	Ser	Glu	Ser	Gln	Gly	Leu	Gly	Ala	Gly	Val	Arg
						55				60					
Thr	Glu	Xaa	Asp	Val	Glu	Glu	Ala	Leu	Arg	Arg	Lys	Leu	Glu	Glu	
65					70				75				80		
Leu	Thr	Ser	Asn	Val	Ser	Asp	Gln	Glu	Thr	Phe	Val	Arg	Gly	Gly	Gly
			85					90					95		
Ser	Gln	Gly	Arg	Lys	Cys	Arg	Ala	Gln	Gln	Gly	Gln	Ile	Ser	Trp	Ala
			100					105				110			
Ser	Pro	Pro	Gly	Gly	Pro	Gly	Arg	Trp	His	Gly	Cys	Pro	Ser	Asn	Gln
			115				120					125			
Gln	Thr	Gly	Lys	Lys	Pro	Gln	Asp	Pro	Gly	Asp	Pro	Val	Gln	Tyr	Asn
						135					140				
Arg	Thr	Thr	Asp	Glu	Glu	Leu	Ser	Glu	Leu	Glu	Asp	Arg	Val	Ala	Val
145					150					155				160	
Thr	Ala	Ser	Glu	Val	Gln	Gln	Ala	Glu	Ser	Glu	Val	Ser	Asp	Ile	Glu
					165				170					175	
Ser	Arg	Ile	Ala	Ala	Leu	Arg	Ala	Ala	Gly	Leu	Thr	Val	Lys	Pro	Ser
			180				185					190			
Gly	Lys	Pro	Arg	Arg	Lys	Ser	Asn	Leu	Pro	Ile	Phe	Leu	Pro	Arg	Val
			195				200					205			
Ala	Gly	Lys	Leu	Gly	Lys	Arg	Pro	Glu	Asp	Pro	Asn	Ala	Asp	Pro	Ser
			210				215				220				
Ser	Glu	Ala	Lys	Ala	Met	Ala	Val	Pro	Ile	Phe					

225

230

235

&lt;210&gt; 4275

&lt;211&gt; 874

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4275

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 120  
 ctcagtcgga agcctgtgtc catcgtgtcc ccggagccag ggaccacccg tgacgtgctg  
 180  
 gagaccccag tcgacctggc cggatttcct gtgctgctga gcgacacggc tgggttgctg  
 240  
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 300  
 gctgacctca ttctggccat gctggatgct tctgacctgg cctctccctc cagttgcaac  
 360  
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 420  
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 480  
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 540  
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 600  
 ctgacccgag caaggcacca gcaccacctc cagggttgcc tggatgccct cggccactac  
 660  
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 720  
 acccgctca caggtggagg gggtagcgag gagatcctgg acatcatctt ccaggacttc  
 780  
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 840  
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 874

&lt;210&gt; 4276

&lt;211&gt; 264

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4276

Met Gln Val Ala Leu Gly Ala His Leu Arg Asp Ala Arg Arg Gly Gln  
 1 5 10 15  
 Arg Leu Arg Ser Gly Ala His Val Val Val Thr Gly Pro Pro Asn Ala  
 20 25 30  
 Gly Lys Ser Ser Leu Val Asn Leu Leu Ser Arg Lys Pro Val Ser Ile  
 35 40 45  
 Val Ser Pro Glu Pro Gly Thr Thr Arg Asp Val Leu Glu Thr Pro Val  
 50 55 60  
 Asp Leu Ala Gly Phe Pro Val Leu Leu Ser Asp Thr Ala Gly Leu Arg

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65          70          75          80
Glu Gly Val Gly Pro Val Glu Gln Glu Gly Val Arg Arg Ala Arg Glu
      85          90          95
Arg Leu Glu Gln Ala Asp Leu Ile Leu Ala Met Leu Asp Ala Ser Asp
      100          105          110
Leu Ala Ser Pro Ser Ser Cys Asn Phe Leu Ala Thr Val Val Ala Ser
      115          120          125
Val Gly Ala Gln Ser Pro Ser Asp Ser Ser Gln Arg Leu Leu Leu Val
      130          135          140
Leu Asn Lys Ser Asp Leu Leu Ser Pro Glu Gly Pro Gly Pro Gly Pro
145          150          155          160
Asp Leu Pro Pro His Leu Leu Leu Ser Cys Leu Thr Gly Glu Gly Leu
      165          170          175
Asp Gly Leu Leu Glu Ala Leu Arg Lys Glu Leu Ala Ala Val Cys Gly
      180          185          190
Asp Pro Ser Thr Asp Pro Pro Leu Leu Thr Arg Ala Arg His Gln His
      195          200          205
His Leu Gln Gly Cys Leu Asp Ala Leu Gly His Tyr Lys Gln Ser Lys
      210          215          220
Asp Leu Ala Leu Ala Ala Glu Ala Leu Arg Val Ala Arg Gly His Leu
225          230          235          240
Thr Arg Leu Thr Gly Gly Gly Gly Thr Glu Glu Ile Leu Asp Ile Ile
      245          250          255
Phe Gln Asp Phe Cys Val Gly Lys
      260

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&lt;210&gt; 4277

&lt;211&gt; 1070

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4277

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120
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180
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240
cccaggetta ctgtctacct ttcacggagg cctagccgtg agaggacaga agaaggcacg
300
tggcgaatca tgacagcgga caaagacaaa gacaaagaca aagagaagga ccgggaccga
360
gaccgggacc gagagagaga gaaaagagac aaagcaagag agagtgagaa ttcaaggcca
420
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480
gacgaggaca atgacaacaa tagtgccacc gcagaggagt ccacgaagaa gaataagaag
540
aaaccaccga aaaaaaagtc tcgttatgaa aggacagata ccggtgagat aacatcctac
600
atcactgaag atgatgtggt ctacagacca ggagactgtg tgtatatcga ggtcggagg
660

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 780  
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 840  
 gaccatctcc tcatgaacgt caaatggtac taccgtcaat ctgagggtcc agattctgtg  
 900  
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 960  
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<210> 4278

<211> 253

<212> PRT

<213> Homo sapiens

<400> 4278

Met	Thr	Ala	Asp	Lys	Asp	Lys	Asp	Lys	Asp	Lys	Glu	Lys	Asp	Arg	Asp
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Arg	Asp	Arg	Asp	Arg	Glu	Arg	Glu	Lys	Arg	Asp	Lys	Ala	Arg	Glu	Ser
			20					25					30		
Glu	Asn	Ser	Arg	Pro	Arg	Arg	Ser	Cys	Thr	Leu	Glu	Gly	Gly	Ala	Lys
			35				40						45		
Asn	Tyr	Ala	Glu	Ser	Asp	His	Ser	Glu	Asp	Glu	Asp	Asn	Asp	Asn	Asn
	50					55				60					
Ser	Ala	Thr	Ala	Glu	Glu	Ser	Thr	Lys	Lys	Asn	Lys	Lys	Lys	Pro	Pro
65					70					75				80	
Lys	Lys	Lys	Ser	Arg	Tyr	Glu	Arg	Thr	Asp	Thr	Gly	Glu	Ile	Thr	Ser
			85					90						95	
Tyr	Ile	Thr	Glu	Asp	Asp	Val	Val	Tyr	Arg	Pro	Gly	Asp	Cys	Val	Tyr
			100					105					110		
Ile	Glu	Ser	Arg	Arg	Pro	Asn	Thr	Pro	Tyr	Phe	Ile	Cys	Ser	Ile	Gln
			115				120					125			
Asp	Phe	Lys	Leu	Val	His	Asn	Ser	Gln	Ala	Cys	Cys	Arg	Ser	Pro	Thr
	130					135				140					
Pro	Ala	Leu	Cys	Asp	Pro	Pro	Ala	Cys	Ser	Leu	Pro	Val	Ala	Ser	Gln
145					150					155				160	
Pro	Pro	Gln	His	Leu	Ser	Glu	Ala	Gly	Arg	Gly	Pro	Val	Gly	Ser	Lys
			165					170						175	
Arg	Asp	His	Leu	Leu	Met	Asn	Val	Lys	Trp	Tyr	Tyr	Arg	Gln	Ser	Glu
			180					185					190		
Val	Pro	Asp	Ser	Val	Tyr	Gln	His	Leu	Val	Gln	Asp	Arg	His	Asn	Glu
			195				200					205			
Asn	Asp	Ser	Gly	Arg	Glu	Leu	Val	Ile	Thr	Asp	Pro	Val	Ile	Lys	Asn
	210					215				220					
Arg	Glu	Leu	Phe	Ile	Ser	Asp	Tyr	Val	Asp	Thr	Tyr	His	Ala	Ala	Ala
225					230					235				240	
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<210> 4279  
<211> 1963  
<212> DNA  
<213> Homo sapiens

<400> 4279  
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120  
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180  
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 1860  
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<210> 4280

<211> 575

<212> PRT

<213> Homo sapiens

<400> 4280

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Met	Met	Tyr	Ser	Leu	Ser	Val	His	Gln	Gln	Leu	Gly	Lys	Met	Val	Gly
		20						25					30		
Val	Ser	Asp	Asp	Val	Asn	Glu	Tyr	Ala	Met	Ala	Leu	Arg	Asp	Thr	Glu
	35						40					45			
Asp	Lys	Leu	Arg	Arg	Cys	Pro	Lys	Arg	Arg	Lys	Asp	Ile	Leu	Ala	Glu
	50					55					60				
Leu	Thr	Lys	Ser	Gln	Lys	Val	Phe	Ser	Glu	Lys	Leu	Asp	His	Leu	Ser
65					70					75				80	
Arg	Arg	Leu	Ala	Trp	Val	His	Ala	Thr	Val	Tyr	Ser	Gln	Glu	Lys	Met
				85					90					95	
Leu	Asp	Ile	Tyr	Trp	Leu	Leu	Arg	Val	Cys	Leu	Arg	Thr	Ile	Glu	His
	100							105					110		
Gly	Asp	Arg	Thr	Gly	Ser	Leu	Phe	Ala	Phe	Met	Pro	Glu	Phe	Tyr	Leu
	115						120					125			
Ser	Val	Ala	Ile	Asn	Ser	Tyr	Ser	Ala	Leu	Lys	Asn	Tyr	Phe	Gly	Pro
	130					135					140				
Val	His	Ser	Met	Glu	Glu	Leu	Pro	Gly	Tyr	Glu	Glu	Thr	Leu	Thr	Arg
145					150					155				160	
Leu	Ala	Ala	Ile	Leu	Ala	Lys	His	Phe	Ala	Asp	Ala	Arg	Ile	Val	Gly
			165						170					175	
Thr	Asp	Ile	Arg	Asp	Ser	Leu	Met	Gln	Ala	Leu	Ala	Ser	Tyr	Val	Cys
	180							185					190		
Tyr	Pro	His	Ser	Leu	Arg	Ala	Val	Glu	Arg	Ile	Pro	Glu	Glu	Gln	Arg
	195					200						205			
Ile	Ala	Met	Val	Arg	Asn	Leu	Leu	Ala	Pro	Tyr	Glu	Gln	Arg	Pro	Trp
	210					215					220				
Ala	Gln	Thr	Asn	Trp	Ile	Leu	Val	Arg	Leu	Trp	Arg	Gly	Cys	Gly	Phe
225					230					235				240	
Gly	Tyr	Arg	Tyr	Thr	Arg	Leu	Pro	His	Leu	Leu	Lys	Thr	Lys	Leu	Glu

				245					250					255		
Asp	Ala	Asn	Leu	Pro	Ser	Leu	Gln	Lys	Pro	Cys	Pro	Ser	Thr	Leu	Leu	
			260					265					270			
Gln	Gln	His	Met	Ala	Asp	Leu	Leu	Gln	Gln	Gly	Pro	Asp	Val	Ala	Pro	
		275					280					285				
Ser	Phe	Leu	Asn	Ser	Val	Leu	Asn	Gln	Leu	Asn	Trp	Ala	Phe	Ser	Glu	
		290					295				300					
Phe	Ile	Gly	Met	Ile	Gln	Glu	Ile	Gln	Gln	Ala	Ala	Glu	Arg	Leu	Glu	
305					310					315					320	
Arg	Asn	Phe	Val	Asp	Ser	Arg	Gln	Leu	Lys	Val	Cys	Ala	Thr	Cys	Phe	
				325					330					335		
Asp	Leu	Ser	Val	Ser	Leu	Leu	Arg	Val	Leu	Glu	Met	Thr	Ile	Thr	Leu	
			340					345					350			
Val	Pro	Glu	Ile	Phe	Leu	Asp	Trp	Thr	Arg	Pro	Thr	Ser	Glu	Met	Leu	
		355					360					365				
Leu	Arg	Arg	Leu	Ala	Gln	Leu	Leu	Asn	Gln	Val	Leu	Asn	Arg	Val	Thr	
		370				375				380						
Ala	Glu	Arg	Asn	Leu	Phe	Asp	Arg	Val	Val	Thr	Leu	Arg	Leu	Pro	Gly	
385					390					395					400	
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				405					410					415		
Leu	Val	Gln	Leu	Leu	Val	Arg	Gly	Pro	Ala	Ser	Glu	Arg	Glu	Gln	Ala	
			420					425					430			
Thr	Ser	Val	Leu	Leu	Ala	Asp	Pro	Cys	Phe	Gln	Leu	Arg	Ser	Ile	Cys	
		435					440					445				
Tyr	Leu	Leu	Gly	Gln	Pro	Glu	Pro	Pro	Ala	Pro	Gly	Thr	Ala	Leu	Pro	
	450					455					460					
Ala	Pro	Asp	Arg	Lys	Arg	Phe	Ser	Leu	Gln	Ser	Tyr	Ala	Asp	Tyr	Ile	
465					470					475					480	
Ser	Ala	Asp	Glu	Leu	Ala	Gln	Val	Glu	Gln	Met	Leu	Ala	His	Leu	Thr	
				485					490					495		
Ser	Ala	Ser	Ala	Gln	Ala	Ala	Ala	Ala	Ser	Leu	Pro	Thr	Ser	Glu	Glu	
			500					505					510			
Asp	Leu	Cys	Pro	Ile	Cys	Tyr	Ala	His	Pro	Ile	Ser	Ala	Val	Phe	Gln	
		515					520					525				
Pro	Cys	Gly	His	Lys	Ser	Cys	Lys	Ala	Cys	Ile	Asn	Gln	His	Leu	Met	
		530				535					540					
Asn	Asn	Lys	Asp	Cys	Phe	Phe	Cys	Lys	Thr	Thr	Ile	Val	Ser	Val	Glu	
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<210> 4281

<211> 507

<212> DNA

<213> Homo sapiens

<400> 4281

acgcgtgaaq ggacagagct ggggccttqt caggagcccc acagttggcc aatggggccag

60

atgccccata gtctcagccc acctctcttc tgccatgagt cccctgattc tgtcctttga

120

gctgactctg agagqcaqtg qgcttcccgc cagcacctcc ccctatcaca ttgtagggc

180

tggtttatga ggccggaagt aagcaagcac cccctcatat caacctggca cttcacaccc  
 240  
 cccatgggta tcagtggggg tgctggctgg ctggcaggca gccagagaca tttcagcagg  
 300  
 tcaggcatgg atgcagggtg aatgagaga ggatcagtga gcgcattcat gtcttttgag  
 360  
 tggctctacag atgagtgggc tccagtctca aatgaggaga acaaataggg aagtaggagc  
 420  
 tcagggttct tgtgtgtctc ataggcagct gcctatccct gggtgataca gctccctggc  
 480  
 acaccattc ccaagggcac aggatcc  
 507

<210> 4282

<211> 106

<212> PRT

<213> Homo sapiens

<400> 4282

Met	Asn	Ala	Leu	Thr	Asp	Pro	Leu	Ser	Phe	Pro	Pro	Ala	Ser	Met	Pro
1				5					10					15	
Asp	Leu	Leu	Lys	Cys	Leu	Trp	Leu	Pro	Ala	Ser	Gln	Pro	Ala	Pro	Pro
			20					25					30		
Leu	Ile	Thr	Met	Gly	Gly	Val	Lys	Cys	Gln	Val	Asp	Met	Arg	Gly	Cys
		35					40					45			
Leu	Leu	Thr	Ser	Gly	Leu	Ile	Asn	Gln	Pro	Tyr	Lys	Cys	Asp	Arg	Gly
		50				55					60				
Arg	Cys	Trp	Arg	Glu	Ala	His	Cys	Leu	Ser	Glu	Ser	Ala	Gln	Arg	Thr
65					70					75				80	
Glu	Ser	Gly	Asp	Ser	Trp	Gln	Lys	Arg	Gly	Gly	Leu	Arg	Leu	Trp	Gly
			85						90					95	
Ile	Trp	Pro	Ile	Gly	Gln	Leu	Trp	Gly	Ser						
			100					105							

<210> 4283

<211> 315

<212> DNA

<213> Homo sapiens

<400> 4283

gaattctcaa ccagaacagc ccagcaggaa aggagccggc atgggggtgcc cctctgcagc  
 60  
 cgaccgtttt cctagaaggc ctaaccgctc aaacggggcag gggagggggg cgggcggccc  
 120  
 gggagaaacc gagtccccgc cgggtcccca ccgtgtggcg ccgaccgaaa taactccagt  
 180  
 ccagctgcaa aaacctccc gaaaacccaa gcttgtccgg cacaacttcg gtctctccag  
 240  
 cctcattcct gcccgactc cgccaaactg ctgcacctgc ccagcgcagc ggatgcagcg  
 300  
 ctcccgccc nacgg  
 315

<210> 4284

<211> 91  
 <212> PRT  
 <213> Homo sapiens

<400> 4284  
 Met Gly Cys Pro Ser Ala Ala Asp Arg Phe Pro Arg Arg Pro Asn Arg  
 1 5 10 15  
 Ser Asn Gly Gln Gly Arg Gly Ala Gly Gly Pro Gly Glu Thr Glu Ser  
 20 25 30  
 Pro Pro Gly Pro His Arg Val Ala Pro Thr Glu Ile Thr Pro Val Gln  
 35 40 45  
 Leu Gln Lys Pro Ser Arg Lys Pro Lys Leu Val Arg His Asn Phe Gly  
 50 55 60  
 Leu Ser Ser Leu Ile Pro Ala Arg Thr Pro Pro Asn Cys Ser Pro Cys  
 65 70 75 80  
 Pro Ala Gln Arg Met Gln Arg Ser Arg Pro Xaa  
 85 90

<210> 4285  
 <211> 591  
 <212> DNA  
 <213> Homo sapiens

<400> 4285  
 nagatctcag agaacttggt gaacattcag aaaatgcaga aaacgcaggt gaaatgccgc  
 60  
 aaaatcctga ccaagatgaa gcagcagggt catgagacag ccgcctgtcc ggagactgaa  
 120  
 gagataccgc agggagccag tggctgctgg aaggatgacc tccagaagga actgagtgat  
 180  
 atatggtgat gccagcctg cagtctgacc cctgaccctc ctctgaaccc gttcccccaa  
 240  
 cgggatctgg cagtgaccac cagaacctgg agcccacctg agtccagact tccctcacc  
 300  
 cctaggactc accccaccac ggcccccaac cttagctgta ctgctgtcta caccctgagc  
 360  
 agtgtggagt ctcccagcgc cccagctcc ttgtcttctt gcaggtctgc tgtgcacgtg  
 420  
 ctgcaggact ccatagacag cctcactttg tgctcggggg cctgtcccaa ggctcagac  
 480  
 ctaagaggcc acaagggcac cagtgcctga gccctccact cccctcctgg gactctgact  
 540  
 ccgactgtga ccaggacctc tcccagccac ctttcagcaa gagcggccgc a  
 591

<210> 4286  
 <211> 106  
 <212> PRT  
 <213> Homo sapiens

<400> 4286  
 Cys Pro Ala Cys Ser Leu Thr Pro Asp Pro Pro Leu Asn Pro Phe Pro  
 1 5 10 15  
 Gln Arg Asp Leu Ala Val Thr Thr Arg Thr Trp Ser Pro Pro Glu Ser

				20					25					30			
Arg	Leu	Pro	Ser	Pro	Pro	Arg	Thr	His	Pro	Thr	Thr	Ala	Pro	Asn	Leu		
		35					40					45					
Ser	Cys	Thr	Ala	Val	Tyr	Thr	Leu	Ser	Ser	Val	Glu	Ser	Pro	Ser	Ala		
	50					55					60						
Pro	Ser	Ser	Leu	Ser	Ser	Cys	Arg	Ser	Ala	Val	His	Val	Leu	Gln	Asp		
65					70					75					80		
Ser	Ile	Asp	Ser	Leu	Thr	Leu	Cys	Ser	Gly	Ala	Cys	Pro	Lys	Ala	Ser		
				85					90					95			
Ser	Leu	Arg	Gly	His	Lys	Gly	Thr	Ser	Ala								
			100					105									

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<210> 4287
<211> 868
<212> DNA
<213> Homo sapiens
```

```

<400> 4287
cgagggcgcg actgcgggggt tcctgggtgct gaggacggac gccattggag ttcccagaaa
60
ggctgagctc tcattctccct gggacccgca gcatggctga gggaagcttc agcgtgcaat
120
cggaaagcta cagtgttgaa gacatggatg agggtagcga cgaagtcggg gaggaagaga
180
tggttgaagg caacgactat gaagaattcg gtgcgtttgg tggctatggc accctcacca
240
gctttgacat ccatatcctc agagccttcg gaagcttggg tccaggcctt cgcattctat
300
cgaatgagcc ctgggaactg gaaaaccnct gtgctggccc agaccctggg ggaggcattg
360
cagctggatc cggaaacact tgccaatgag acggccgccc gtgctgccaa cgtagcccg
420
gccgccgcct ccaaccgtgc ggctcggggc gctgccggcg ctgcccgtag cgccttcagt
480
caggtgggtc ctagccaccg ggtggccacg ccgcaggtct caggagagga taccagccc
540
acgacctacg ccgccgaggc tcagggggcc acccctgagc cacccttgcc ttctccgcag
600
acctcccaga tgtagtcac cagtaagatg gctgccccg aggctccggc aacctccgca
660
cagtcaccaga caggctcccc ggcccaggag gctgctactg agggccctag tagcgctgt
720
gcattctctc aggtccgtg tgccaggagg gtggacgcca accggcccag cacagccttc
780
ctggggccaga atgatgtctt cgatttcact cagccggcag tgtcagtggc atggcttccc
840
gcgcccaga gacctgccc gccaagag
868

```

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<210> 4288
<211> 240
<212> PRT
<213> Homo sapiens
```

&lt;400&gt; 4288

Met Arg Val Ala Thr Lys Ser Gly Arg Lys Arg Trp Leu Lys Ala Thr  
 1 5 10 15  
 Thr Met Lys Asn Ser Val Arg Leu Val Ala Met Ala Pro Ser Pro Ala  
 20 25 30  
 Leu Thr Ser Ile Ser Ser Glu Pro Ser Glu Ala Trp Val Gln Ala Phe  
 35 40 45  
 Ala Ser Tyr Arg Met Ser Pro Gly Asn Trp Lys Thr Xaa Val Leu Ala  
 50 55 60  
 Gln Thr Leu Val Glu Ala Leu Gln Leu Asp Pro Glu Thr Leu Ala Asn  
 65 70 75 80  
 Glu Thr Ala Ala Arg Ala Ala Asn Val Ala Arg Ala Ala Ala Ser Asn  
 85 90 95  
 Arg Ala Ala Arg Ala Ala Ala Ala Ala Arg Thr Ala Phe Ser Gln  
 100 105 110  
 Val Val Ala Ser His Arg Val Ala Thr Pro Gln Val Ser Gly Glu Asp  
 115 120 125  
 Thr Gln Pro Thr Thr Tyr Ala Ala Glu Ala Gln Gly Pro Thr Pro Glu  
 130 135 140  
 Pro Pro Leu Ala Ser Pro Gln Thr Ser Gln Met Leu Val Thr Ser Lys  
 145 150 155 160  
 Met Ala Ala Pro Glu Ala Pro Ala Thr Ser Ala Gln Ser Gln Thr Gly  
 165 170 175  
 Ser Pro Ala Gln Glu Ala Ala Thr Glu Gly Pro Ser Ser Ala Cys Ala  
 180 185 190  
 Phe Ser Gln Ala Pro Cys Ala Arg Glu Val Asp Ala Asn Arg Pro Ser  
 195 200 205  
 Thr Ala Phe Leu Gly Gln Asn Asp Val Phe Asp Phe Thr Gln Pro Ala  
 210 215 220  
 Val Ser Val Ala Trp Leu Pro Ala Pro Lys Arg Pro Ala Gln Pro Arg  
 225 230 235 240

&lt;210&gt; 4289

&lt;211&gt; 353

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4289

ggatccctgg gaagatgact accctgcctg tgcgggatat gagggagaaa tatgggagcc  
 60  
 tcctcacttc aggtgtcact gctcagcata tatccaggct ttgttttcat attggtcttg  
 120  
 caaagagcct tttgggaaca gttttcttat tgaaacatac tcagtgttta aacctgcagg  
 180  
 tgtgggttg tggcagtcca catggcatcc tttgctctgt ccctgttctc ctgtctctgg  
 240  
 ctattcaggt tcccgtgagg atactgtcac ccttgaataa tggagcttgc ggaagaccaa  
 300  
 gccctgttt ttggagtcc tgtgctgagg ccgctgtaac ttgcggagag ttg  
 353

&lt;210&gt; 4290

&lt;211&gt; 113

&lt;212&gt; PRT



<213> Homo sapiens

<400> 4290

```

Met Thr Thr Leu Pro Val Arg Asp Met Arg Glu Lys Tyr Gly Ser Leu
 1           5           10           15
Leu Thr Ser Gly Val Thr Ala Gln His Ile Ser Arg Leu Cys Phe His
 20           25           30
Ile Gly Leu Ala Lys Ser Leu Leu Gly Thr Val Phe Leu Leu Lys His
 35           40           45
Thr Gln Cys Leu Asn Leu Gln Val Trp Val Gly Gly Ser Pro His Gly
 50           55           60
Ile Leu Cys Ser Val Pro Val Leu Leu Ser Leu Ala Ile Gln Val Pro
 65           70           75           80
Val Arg Ile Leu Ser Pro Leu Asn Asn Gly Ala Cys Gly Arg Pro Ser
 85           90           95
Pro Cys Phe Trp Ser Pro Cys Ala Glu Ala Ala Val Thr Cys Gly Glu
 100          105          110
Leu

```

<210> 4291

<211> 517

<212> DNA

<213> Homo sapiens

<400> 4291

```

nnaaatttgc caagccaaga gttaccccag gaagattctc tcttacatgg ccaattttca
60
caagcagtca ctcccctagc ccatcatcac acagattatt caaagcccac cgatatctca
120
tgagagaca cactttctca gaagtttgga tcttcagatc acttgagaaa actatttaag
180
atgatgaag caagtgccca gctccttgct tataaggaaa aaggccattc tcagagtcca
240
caattttcct ctgatcaaga aatagctcat ctgctgcctg aaaatgtgag tgcgctccca
300
gctacgggtg cagttgcttc tccacatacc acctcggcta ctccaaagcc cgccaccctt
360
ctaccaccca atgcttcagt gacaccttct gggacttccc agccacagct ggccaccaca
420
gtccacctg taaccactgt cacttctcag cctccacga ccctcatttc tacagttttt
480
acacgggctg tggctacact ccaagcaatg gctacaa
517

```

<210> 4292

<211> 172

<212> PRT

<213> Homo sapiens

<400> 4292

```

Xaa Asn Leu Pro Ser Gln Glu Leu Pro Gln Glu Asp Ser Leu Leu His
 1           5           10           15
Gly Gln Phe Ser Gln Ala Val Thr Pro Leu Ala His His His Thr Asp

```

			20					25					30			
Tyr	Ser	Lys	Pro	Thr	Asp	Ile	Ser	Trp	Arg	Asp	Thr	Leu	Ser	Gln	Lys	
		35					40					45				
Phe	Gly	Ser	Ser	Asp	His	Leu	Glu	Lys	Leu	Phe	Lys	Met	Asp	Glu	Ala	
	50					55					60					
Ser	Ala	Gln	Leu	Leu	Ala	Tyr	Lys	Glu	Lys	Gly	His	Ser	Gln	Ser	Ser	
65					70					75					80	
Gln	Phe	Ser	Ser	Asp	Gln	Glu	Ile	Ala	His	Leu	Leu	Pro	Glu	Asn	Val	
				85					90					95		
Ser	Ala	Leu	Pro	Ala	Thr	Val	Ala	Val	Ala	Ser	Pro	His	Thr	Thr	Ser	
			100					105					110			
Ala	Thr	Pro	Lys	Pro	Ala	Thr	Leu	Leu	Pro	Thr	Asn	Ala	Ser	Val	Thr	
		115					120					125				
Pro	Ser	Gly	Thr	Ser	Gln	Pro	Gln	Leu	Ala	Thr	Thr	Ala	Pro	Pro	Val	
	130					135					140					
Thr	Thr	Val	Thr	Ser	Gln	Pro	Pro	Thr	Thr	Leu	Ile	Ser	Thr	Val	Phe	
145					150					155					160	
Thr	Arg	Ala	Val	Ala	Thr	Leu	Gln	Ala	Met	Ala	Thr					
				165					170							

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<210> 4293
<211> 547
<212> DNA
<213> Homo sapiens
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<400> 4293
gccggcgccc ccggcgcgga tgcctgctct gtgcctgtat ctgagatcat cgccgttgag
60
gaaacagacg ttcacgggaa acatcaaggc agtggaaaat ggcagaaaat ggaaaagcct
120
tacgttttta cagttcactg tgtaaagaga gcacgacggc accgctggaa gtgggcgcag
180
gtgactttct ggtgtccaga ggagcagctg tgtcacttgt ggctgcgac cctgcgggag
240
atgctggaga agctgacgtc cagaccaaag catttactgg tatttatcaa cccgtttgga
300
ggaaaaggac aaggcaagcg gatatatgaa agaaaagtgg caccactgtt caccttagcc
360
tccatcacca ctgacatcat cgttactgaa catgctaata aggccaagga gactctgtat
420
gagattaaca tagacaaata cgacggcatc gtctgtgtcg gcggagatgg tatgttcagc
480
gaggtgctgc acggtctgat tgggaggacg cagaggagcg cgggggtcga ccagaaccac
540
ccccggg
547

```

```
<210> 4294
<211> 182
<212> PRT
<213> Homo sapiens
```

<400> 4294  
Ala Gly Ala Pro Gly Ala Asp Ala Cys Ser Val Pro Val Ser Glu Ile

```

      1           5           10           15
Ile Ala Val Glu Thr Asp Val His Gly Lys His Gln Gly Ser Gly
      20           25           30
Lys Trp Gln Lys Met Glu Lys Pro Tyr Ala Phe Thr Val His Cys Val
      35           40           45
Lys Arg Ala Arg Arg His Arg Trp Lys Trp Ala Gln Val Thr Phe Trp
      50           55           60
Cys Pro Glu Glu Gln Leu Cys His Leu Trp Leu Gln Thr Leu Arg Glu
      65           70           75           80
Met Leu Glu Lys Leu Thr Ser Arg Pro Lys His Leu Leu Val Phe Ile
      85           90           95
Asn Pro Phe Gly Lys Gly Gln Gly Lys Arg Ile Tyr Glu Arg Lys
      100          105          110
Val Ala Pro Leu Phe Thr Leu Ala Ser Ile Thr Thr Asp Ile Ile Val
      115          120          125
Thr Glu His Ala Asn Gln Ala Lys Glu Thr Leu Tyr Glu Ile Asn Ile
      130          135          140
Asp Lys Tyr Asp Gly Ile Val Cys Val Gly Gly Asp Gly Met Phe Ser
      145          150          155          160
Glu Val Leu His Gly Leu Ile Gly Arg Thr Gln Arg Ser Ala Gly Val
      165          170          175
Asp Gln Asn His Pro Arg
      180

```

&lt;210&gt; 4295

&lt;211&gt; 431

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4295

```

nntctagaaa atcactgtct ccttctacce tgccatctct acaccagggt taaaaacaag
60
agcccaactgc tggctccttg ttttgtaa atagatttgtt ggactacagc tatgcccgtg
120
catgtacatt ttgtgtatgg ctgcttttgt gccacaacag cagggttgag tattgcgaca
180
gagacccccca ttgccacaaa gcctaaaaca ttgccatcg agccctttaa gaaagagttt
240
gctggccgtg cgcggtggcc gtggctcccg cctgtaatcc cagcactttg gaaggctgag
300
gcaggcggtg aggtctggag ttcgaaacca gcctggccag cgtggcgaaa ccctgtctcc
360
ccctcccaga ttcacgtgat tatcccacct cagcctcctg agtacctggg actataggcg
420
cgtgccaacc a
431

```

&lt;210&gt; 4296

&lt;211&gt; 138

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4296

```

Xaa Leu Glu Asn His Cys Leu Leu Leu Pro Cys His Leu Tyr Thr Arg

```

```

      1           5           10           15
Val Thr Asn Lys Ser Pro Leu Leu Ala Pro Cys Phe Val Asn Lys Ile
      20           25           30
Cys Trp Thr Thr Ala Met Pro Val His Val His Phe Val Tyr Gly Cys
      35           40           45
Phe Cys Ala Thr Thr Ala Gly Leu Ser Ile Ala Thr Glu Thr Pro Ile
      50           55           60
Ala His Lys Pro Lys Thr Phe Ala Ile Glu Pro Phe Lys Lys Glu Phe
      65           70           75           80
Ala Gly Arg Ala Arg Trp Pro Trp Leu Pro Pro Val Ile Pro Ala Leu
      85           90           95
Trp Lys Ala Glu Ala Gly Gly Glu Val Trp Ser Ser Lys Pro Ala Trp
      100          105          110
Pro Ala Trp Arg Asn Pro Val Ser Pro Ser Gln Ile His Val Ile Ile
      115          120          125
Pro Pro Gln Pro Pro Glu Tyr Leu Gly Leu
      130          135

```

&lt;210&gt; 4297

&lt;211&gt; 1668

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4297

```

nccatggact cggcctttgt gggataaaag gtcaaccaag tgtcagctgc agttggaaaa
60
gatttcaccg tgattccatc taaactgatt cagtttgacc caggaatgtc aactaagatg
120
tggaatatag caattaccta tgacggatta gaggaagatg atgaggtctt tgaagtaatt
180
ctgaactccc ctgtgaatgc agttcttggc acaaagacaa aagctgcagt gaaaattttg
240
gactcaaaaag gaggacaatg ccataccttca tattctctcca accaaagcaa gcacagcaca
300
tgaggagaagg gcatttggca tctgctgccc ccagggtctt cctcatccac cacttctggt
360
tcctttcatc tggaaagaag acctcttcca tcttccatgc agctagcagt catcagggga
420
gacaccctgc ggggctttga ttctacagat ctttctcaaa ggaagcttag gaccctgagg
480
aatggcaaaa cagttcgtcc atcctctggt tatagaaatg gaacagacat catctataat
540
tatcatggga tagtttcctt gaaactggag gatgacagtt tcccaactca caaaagggaag
600
gccaaagtat ccatacattag tcagccacaa aagacaatca aagtggcaga actgcctcaa
660
gcagataagg tggaatccac aactgactca cacttcccca gacaggacca gttgccctca
720
tttccaaaga actgcactct ggaattaaag ggactcttcc attttgaaga aggcattccag
780
aagctgtatc agtgcattgg gatcgctgg aaagcctgga gtcccaaac caaggatgtg
840
gaagacaaat cctgtccagc cgggtggcac cagcactcag gctactgtca catcttgatc
900

```

acagagcaga aaggcacctg gaatgcggct gcccaagctt gcaggggaaca atacctgggc  
 960  
 aaccttgtaa ctgtattctc caggcagcac atgcgggtggc tctgggacat tgggtgggaga  
 1020  
 aagtcctttt ggataggttt gaacgaccaa gtgcatgctg gccactggga gtggatcggc  
 1080  
 ggtgaacctg ttgccttcac caatgggaga agagggccct ctccacgctc caagcttggg  
 1140  
 aagagctgtg ttttggttca aagacaaggg aaatggcaaa caaaagactg taggagagcc  
 1200  
 aaacctcata attatgtgtg ttccagaaaa ctctaaatat aacagaccct acaggggggc  
 1260  
 acctggagtt tgtcacctat ttattcacag gatctgtgaa tattgtctca tagaaaacaa  
 1320  
 attgttatga ttgagtgggt atacctttgt gattctgtct agtgaaaatg ggacattttt  
 1380  
 aatagtgccg gaaagattga taaataaata ttttttacia gataagatac aatttttgta  
 1440  
 tctcaatacc ttttaaaata aatgccagca gtattaaaaa gtgtaagggt tgtttattcc  
 1500  
 agaagaccct cacccttacc ccattccaaa tctcaggag caccagtctc atagtccttg  
 1560  
 gatttttttt aaaaaaatt tttggtcccg ttacctctaa tgaatttatt ctgaaatatg  
 1620  
 tatcgtaggt gtcctacca ctttagtctg agtggaaagc caaaaaac  
 1668

<210> 4298

<211> 411

<212> PRT

<213> Homo sapiens

<400> 4298

Xaa	Met	Asp	Ser	Ala	Phe	Val	Gly	Ile	Lys	Val	Asn	Gln	Val	Ser	Ala
1				5					10					15	
Ala	Val	Gly	Lys	Asp	Phe	Thr	Val	Ile	Pro	Ser	Lys	Leu	Ile	Gln	Phe
			20					25					30		
Asp	Pro	Gly	Met	Ser	Thr	Lys	Met	Trp	Asn	Ile	Ala	Ile	Thr	Tyr	Asp
		35					40					45			
Gly	Leu	Glu	Glu	Asp	Asp	Glu	Val	Phe	Glu	Val	Ile	Leu	Asn	Ser	Pro
	50					55					60				
Val	Asn	Ala	Val	Leu	Gly	Thr	Lys	Thr	Lys	Ala	Ala	Val	Lys	Ile	Leu
65					70					75				80	
Asp	Ser	Lys	Gly	Gly	Gln	Cys	His	Pro	Ser	Tyr	Ser	Ser	Asn	Gln	Ser
			85					90					95		
Lys	His	Ser	Thr	Trp	Glu	Lys	Gly	Ile	Trp	His	Leu	Leu	Pro	Pro	Gly
		100						105					110		
Ser	Ser	Ser	Ser	Thr	Thr	Ser	Gly	Ser	Phe	His	Leu	Glu	Arg	Arg	Pro
		115					120					125			
Leu	Pro	Ser	Ser	Met	Gln	Leu	Ala	Val	Ile	Arg	Gly	Asp	Thr	Leu	Arg
	130					135					140				
Gly	Phe	Asp	Ser	Thr	Asp	Leu	Ser	Gln	Arg	Lys	Leu	Arg	Thr	Arg	Gly
145					150					155				160	
Asn	Gly	Lys	Thr	Val	Arg	Pro	Ser	Ser	Val	Tyr	Arg	Asn	Gly	Thr	Asp

```
<210> 4299
<211> 988
<212> DNA
<213> Homo sapiens
```

```

nngcgaccgc tcttgctgaa aggtggctgg gagaggctct ggtcagagtc ggagtcagag
60
tcccaggagg ggagtggagg gctcaggcac tggtgccctt gtggcctctt aggctcgagg
120
ccttgggaca ggcctccgag cacaaagtga ggctgtctat ggagttctgc agcacgtgca
180
cagcagacca tatatcactc agttccttct ggaggtcac cttccagcag ccactggctc
240
cctgcggtat ctcttcagtc tccggacagg cggtgtctc atgacctgc tgcttcatct
300
tggtcaggat tttgcggcat ttcacctgcg ttttctgcat tttctgaatg ttcaccaagt
360
tctctgagat ctcatcctcc tgcgttggg gcttctgata gatgaaggtc acctcctccc
420
gcaccagttc cagctcctcc cacaggaaact tcttgctgtc ccggatctcc tgggccagca
480

```

gctgcaggca gcgagtgggtg cgggcccgt gcatctcttc actgtcacgc agggttcttct  
 540  
 ccagccccctg aaggccttggt gtcagggccc catcacagctc ctgccggccc tgctccatgc  
 600  
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&lt;210&gt; 4300

&lt;211&gt; 84

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4300

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&lt;210&gt; 4301

&lt;211&gt; 2429

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4301

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<210> 4302

<211> 717

<212> PRT

<213> Homo sapiens

<400> 4302

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Glu	Gly	Val	Gly	Gly	Gly	Ala	Ser	Ala	Leu	Thr	Ser	Gly	Ile	Ala	Ser
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<400> 4304															
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Arg Thr Ala Ser Leu Val Thr Arg Gln Met Gln Glu His Glu Gln Asp
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Ser Glu Leu Arg Glu Gln Met Ser Gly Tyr Lys Arg Met Arg Arg Gln
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Asp Glu His Arg Leu Arg Leu Asp Lys Asp Leu Glu Thr Gln Arg Asn
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Asn Phe Ala Ala Glu Met Glu Lys Leu Ile Lys Lys His Gln Ala Ala
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&lt;210&gt; 4305

&lt;211&gt; 3400

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4305

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&lt;210&gt; 4306

&lt;211&gt; 1052

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4306

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Ala	Leu	Arg	Ala	Leu	Lys	Ile	Leu	Trp	Leu	Ser	Gly	Ala	Glu	Leu
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Gln	Arg	Leu	Lys	Met	Leu	Asn	Leu	Ser	Ser	Asn	Leu	Phe	Glu	Glu
	275					280						285		Phe
Pro	Ala	Ala	Leu	Leu	Pro	Leu	Ala	Gly	Leu	Glu	Glu	Leu	Tyr	Leu
	290				295				300					Ser
Arg	Asn	Gln	Leu	Thr	Ser	Val	Pro	Ser	Leu	Ile	Ser	Gly	Leu	Gly
305					310				315					320
Leu	Leu	Thr	Leu	Trp	Leu	Asp	Asn	Asn	Arg	Ile	Arg	Tyr	Leu	Pro
			325					330						335
Ser	Ile	Val	Glu	Leu	Thr	Gly	Leu	Glu	Glu	Leu	Val	Leu	Gln	Gly
			340					345					350	Asn
Gln	Ile	Ala	Val	Leu	Pro	Asp	His	Phe	Gly	Gln	Leu	Ser	Arg	Val
	355					360						365		Gly
Leu	Trp	Lys	Ile	Lys	Asp	Asn	Pro	Leu	Ile	Gln	Pro	Pro	Tyr	Glu
	370				375					380				Val
Cys	Met	Lys	Gly	Ile	Pro	Tyr	Ile	Ala	Ala	Tyr	Gln	Lys	Glu	Leu
385					390				395					400
His	Ser	Gln	Pro	Ala	Val	Gln	Pro	Arg	Leu	Lys	Leu	Leu	Leu	Met
			405					410						415
His	Lys	Ala	Ala	Gly	Lys	Thr	Leu	Leu	Arg	His	Cys	Leu	Thr	Glu
			420				425						430	Glu
Arg	Val	Glu	Gly	Cys	Pro	Gly	Gly	Asp	Lys	Glu	Lys	Cys	Tyr	Pro
	435					440						445		
Pro	Ser	Pro	Pro	Pro	Val	Ser	Lys	Gly	Ile	Glu	Val	Thr	Ser	Trp
	450				455				460					Thr
Ala	Asp	Ala	Ser	Arg	Gly	Leu	Arg	Phe	Ile	Val	Tyr	Asp	Leu	Ala
465					470				475					480
Asp	Glu	Ser	Tyr	Glu	Val	Ile	Gln	Pro	Phe	Leu	Ser	Pro	Gly	Ala
			485					490					495	
Leu	Tyr	Val	Leu	Val	Val	Asn	Leu	Ala	Thr	Tyr	Glu	Pro	Arg	His
														Phe

			500					505					510				
Pro	Thr	Thr	Val	Gly	Ser	Phe	Leu	His	Arg	Val	Gly	Ala	Arg	Val	Pro		
		515					520					525					
Asn	Ala	Val	Val	Cys	Ile	Val	Gly	Thr	His	Ala	Asp	Leu	Cys	Gly	Glu		
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Arg	Glu	Leu	Glu	Glu	Lys	Cys	Leu	Asp	Ile	His	Arg	Gln	Ile	Ala	Leu		
545					550					555					560		
Gln	Glu	Lys	His	Asp	Ala	Glu	Gly	Leu	Ser	Arg	Leu	Ala	Lys	Val	Val		
				565					570					575			
Asp	Glu	Ala	Leu	Ala	Arg	Asp	Phe	Glu	Leu	Arg	Ser	Ala	Ser	Pro	His		
				580				585					590				
Ala	Ala	Tyr	Gly	Val	Ser	Asp	Lys	Asn	Leu	Arg	Arg	Arg	Lys	Ala			
	595					600					605						
His	Phe	Gln	Tyr	Leu	Leu	Asn	His	Arg	Leu	Gln	Ile	Leu	Ser	Pro	Val		
	610					615					620						
Leu	Pro	Val	Ser	Cys	Arg	Asp	Pro	Arg	His	Leu	Arg	Arg	Leu	Arg	Asp		
625					630					635					640		
Lys	Leu	Leu	Ser	Val	Ala	Glu	His	Arg	Glu	Ile	Phe	Pro	Asn	Leu	His		
				645					650					655			
Arg	Val	Leu	Pro	Arg	Ser	Trp	Gln	Val	Leu	Glu	Glu	Leu	His	Phe	Gln		
				660				665					670				
Pro	Pro	Gln	Ala	Gln	Arg	Leu	Trp	Leu	Ser	Trp	Trp	Asp	Ser	Ala	Arg		
	675					680						685					
Leu	Gly	Leu	Gln	Ala	Gly	Leu	Thr	Glu	Asp	Arg	Leu	Gln	Ser	Ala	Leu		
	690					695					700						
Ser	Tyr	Leu	His	Glu	Ser	Gly	Lys	Leu	Leu	Tyr	Phe	Glu	Asp	Ser	Pro		
705					710					715					720		
Ala	Leu	Lys	Glu	His	Val	Phe	His	Asn	Leu	Thr	Arg	Leu	Ile	Asp	Ile		
				725					730					735			
Leu	Asn	Val	Phe	Phe	Gln	Arg	Asp	Pro	Ser	Leu	Leu	Leu	His	Lys	Leu		
	740							745					750				
Leu	Leu	Gly	Thr	Ser	Gly	Glu	Gly	Lys	Ala	Glu	Gly	Glu	Ser	Ser	Pro		
	755					760					765						
Pro	Met	Ala	Arg	Ser	Thr	Pro	Ser	Gln	Glu	Leu	Leu	Arg	Ala	Thr	Gln		
	770					775					780						
Leu	His	Gln	Tyr	Val	Glu	Gly	Phe	Leu	Leu	His	Gly	Leu	Leu	Pro	Ala		
785					790					795					800		
His	Val	Ile	Arg	Leu	Leu	Lys	Pro	His	Val	Gln	Ala	Gln	Gln	Asp			
				805				810						815			
Leu	Gln	Leu	Leu	Glu	Leu	Leu	Glu	Lys	Met	Gly	Leu	Cys	Tyr	Cys			
			820					825				830					
Leu	Asn	Lys	Pro	Lys	Gly	Lys	Pro	Leu	Asn	Gly	Ser	Thr	Ala	Trp	Tyr		
	835					840					845						
Lys	Phe	Pro	Cys	Tyr	Val	Gln	Asn	Glu	Val	Pro	His	Ala	Glu	Ala	Trp		
	850					855	</										



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          930              935              940
Ser His Ala Ser Leu Pro Asn Ile Trp Thr Ala Trp Gln Ala Ile Thr
945          950          955          960
Pro Leu Val Glu Glu Leu Asn Val Leu Leu Gln Glu Trp Pro Gly Leu
          965          970          975
His Tyr Thr Val His Ile Leu Cys Ser Lys Cys Leu Lys Arg Gly Ser
          980          985          990
Pro Asn Pro His Ala Phe Pro Gly Glu Leu Leu Ser Gln Pro Arg Pro
          995          1000          1005
Glu Gly Val Ala Glu Ile Ile Cys Pro Lys Asn Gly Ser Glu Arg Val
          1010          1015          1020
Asn Val Ala Leu Val Tyr Pro Pro Thr Pro Thr Val Ile Ser Pro Cys
1025          1030          1035          1040
Ser Lys Lys Asn Val Gly Glu Lys His Arg Asn Gln
          1045          1050

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<210> 4307  
 <211> 947  
 <212> DNA  
 <213> Homo sapiens

<400> 4307  
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 120  
 aggacagaac tgatcgatac gtccaggctc tgaggaccgt ctctctcctc ctgggcgagc  
 180  
 cgttcttcac taccagcctg ctgccgtggc acaacctcta ctcttggtac gtgcggacgc  
 240  
 tgtggaccag cacctggggc caggtgccat ggtgatgcc caggcagcct cgctgcacgc  
 300  
 tgtggttggt gagttcaggg tgtgcagga acagcaagat gtgcctcttg ttcttgctgc  
 360  
 cacgcttccc tgtgtcctgc gggcggtgt ggtggggct gctccttctt cacaggancc  
 420  
 tgtggcggtat ccggagccnc ctgtggtgac tgcgaaggct tcgacgtgca catcatggat  
 480  
 gacatgatta aggtaggcag ggccacactc tgcatagtcc ccccgacctg ctctgtatc  
 540  
 gcaggcctct cacagggtcc cagcttgggc agcacaggct ctctgttggt gggcagtgag  
 600  
 gtcagggtgt gccattttgt gtggttcaac atgagcattg cttggtacca gccctgttct  
 660  
 tggctccgtg ctgtcaccct gtgtcagaat ctccactggg cctgcacgtc ctgtcattgc  
 720  
 aactgcccct gccagtgcac acagcttctt ttctagtggg gctgactttc cagaggccat  
 780  
 ctgggaacct tottaggcag ccatttccat ggtgggggct ccattcccgg gaggggtacc  
 840  
 tgaggagatt cccacaggtt atttacatgg taggggttag caactgggcc tacgttctcc  
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<210> 4308  
 <211> 200  
 <212> PRT  
 <213> Homo sapiens

<400> 4308  
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 Cys Arg Gly Thr Thr Ser Thr Ser Gly Thr Cys Gly Arg Cys Gly Pro  
 20 25 30  
 Ala Pro Gly Ala Arg Cys His Gly Asp Ala Pro Gly Ser Leu Ala Ala  
 35 40 45  
 Arg Cys Gly Cys Gly Val Gln Gly Val Gln Gly Thr Ala Arg Cys Ala  
 50 55 60  
 Ser Cys Ser Cys Cys His Ala Ser Leu Cys Pro Ala Gly Gly Cys Gly  
 65 70 75 80  
 Trp Gly Cys Ser Phe Leu Thr Gly Xaa Cys Gly Gly Ser Gly Ala Xaa  
 85 90 95  
 Cys Gly Asp Cys Glu Gly Phe Asp Val His Ile Met Asp Asp Met Ile  
 100 105 110  
 Lys Val Gly Arg Ala Thr Leu Cys Ile Val Pro Pro Thr Cys Ser Cys  
 115 120 125  
 Ile Ala Gly Leu Ser Gln Gly Pro Ser Leu Gly Ser Thr Gly Ser Ser  
 130 135 140  
 Val Gly Gly Ser Glu Val Arg Cys Cys His Phe Val Trp Phe Asn Met  
 145 150 155 160  
 Ser Ile Ala Trp Tyr Gln Pro Cys Ser Trp Leu Arg Ala Val Thr Leu  
 165 170 175  
 Cys Gln Asn Leu His Trp Ala Cys Thr Ser Cys His Cys Asn Cys Pro  
 180 185 190  
 Cys Gln Cys Pro Gln Leu Leu Phe  
 195 200

<210> 4309  
 <211> 1928  
 <212> DNA  
 <213> Homo sapiens

<400> 4309  
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 120  
 gtcgcctttg aactggaga actgaacaga ttgggagggt gatgtgttaa gaccacataa  
 180  
 tccatttgaa atctcaacct ttccagggtc actatcacct tcaatgacat tcacagaagt  
 240  
 ttcccgatct gttaaactgt ctgaaatact tggatgattt tcatccaaag ttgaagtttc  
 300  
 aagatttggt tcatcattca cctgttgaat tataaccctt tctgaatgct ttgatttata  
 360  
 aataggcatg aaaaattcag ttggtgaagg gaatatctcg ttctcattct ttggtgccga  
 420

caataacata tccaaagcct tttggtattg ttgacgttcc tgctgaattg ttacttcact  
480  
ttcatttttt aattcatttg gttctgaatt cccagccttt tcaaaatcaa atacattcaa  
540  
catatcaaca tcattttgct ttaccgagtt ttccctccgat gtgcagccta agtctacttt  
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caggacatgc agcaggtggc gcattttttc ctccctccaaa tgtttatttt gttttatatg  
660  
tcgctcgaac agtcgttcta aaaacctggt tgaaaataaa ccaagtttca aaatttcac  
720  
tgttacatct tcaatgaaac tcagatacaa cagttcttct tcatcagagt agattttacg  
780  
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atcatcctta atctcatccc atgttgagtc atgcccttct aaaggtaaag gagctatttt  
900  
ttctttggca tcatatgtca cacaattaga tgcctgcttt atgttcattt ctgaatctgt  
960  
catgttttta gtctcagctg tccccaaact agatttaaag ctttaattcag tctgggtttc  
1020  
agcttctatc cggtgatctg taaaatcctt ttttcttttg gcaggtgtat aatagcgata  
1080  
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1140  
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1200  
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1260  
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1320  
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1380  
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1440  
catgtcatcc tcaatttgcg gttcgctga gggcttttgt aaggatttaa aaagtgactt  
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1560  
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1620  
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1740  
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1800  
tctgggaagg acagaggttg ctctgactct ccggctgcca ttcatgctta gtcctcttgc  
1860  
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1928

&lt;210&gt; 4310

<211> 599  
 <212> PRT  
 <213> Homo sapiens

<400> 4310

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Gly Pro Pro Cys Leu Phe Lys Gly His Leu Ser Thr Lys Ser Asn Ala
 20              25              30
Phe Cys Thr Asp Ser Ser Ser Leu Arg Leu Ser Thr Leu Gln Leu Val
 35              40              45
Lys Asn His Met Ala Val His Tyr Asn Lys Ile Leu Ser Ala Lys Ala
 50              55              60
Ala Val Asp Cys Ser Val Pro Val Ser Val Ser Thr Ser Ile Lys Tyr
 65              70              75              80
Ala Asp Gln Gln Arg Arg Glu Lys Leu Lys Lys Glu Leu Ala Gln Cys
 85              90              95
Glu Lys Glu Phe Lys Leu Thr Lys Thr Ala Met Arg Ala Asn Tyr Lys
 100             105             110
Asn Asn Ser Lys Ser Leu Phe Asn Thr Leu Gln Lys Pro Ser Gly Glu
 115             120             125
Pro Gln Ile Glu Asp Asp Met Leu Lys Glu Glu Met Asn Gly Phe Ser
 130             135             140
Ser Phe Ala Arg Ser Leu Val Pro Ser Ser Glu Arg Leu His Leu Ser
 145             150             155             160
Leu His Lys Ser Ser Lys Val Ile Thr Asn Gly Pro Glu Lys Asn Ser
 165             170             175
Ser Ser Ser Pro Ser Ser Val Asp Tyr Ala Ala Ser Gly Pro Arg Lys
 180             185             190
Leu Ser Ser Gly Ala Leu Tyr Gly Arg Arg Pro Arg Ser Thr Phe Pro
 195             200             205
Asn Ser His Arg Phe Gln Leu Val Ile Ser Lys Ala Pro Ser Gly Asp
 210             215             220
Leu Leu Asp Lys His Ser Glu Leu Phe Ser Asn Lys Gln Leu Pro Phe
 225             230             235             240
Thr Pro Arg Thr Leu Lys Thr Glu Ala Lys Ser Phe Leu Ser Gln Tyr
 245             250             255
Arg Tyr Tyr Thr Pro Ala Lys Arg Lys Lys Asp Phe Thr Asp Gln Arg
 260             265             270
Ile Glu Ala Glu Thr Gln Thr Glu Leu Ser Phe Lys Ser Glu Leu Gly
 275             280             285
Thr Ala Glu Thr Lys Asn Met Thr Asp Ser Glu Met Asn Ile Lys Gln
 290             295             300
Ala Ser Asn Cys Val Thr Tyr Asp Ala Lys Glu Lys Ile Ala Pro Leu
 305             310             315             320
Pro Leu Glu Gly His Asp Ser Thr Trp Asp Glu Ile Lys Asp Asp Ala
 325             330             335
Leu Gln His Ser Ser Pro Arg Ala Met Cys Gln Tyr Ser Leu Lys Pro
 340             345             350
Pro Ser Thr Arg Lys Ile Tyr Ser Asp Glu Glu Glu Leu Leu Tyr Leu
 355             360             365
Ser Phe Ile Glu Asp Val Thr Asp Glu Ile Leu Lys Leu Gly Leu Phe
 370             375             380
Ser Asn Arg Phe Leu Glu Arg Leu Phe Glu Arg His Ile Lys Gln Asn

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385                      390                      395                      400  
 Lys His Leu Glu Glu Glu Lys Met Arg His Leu Leu His Val Leu Lys  
                          405                      410                      415  
 Val Asp Leu Gly Cys Thr Ser Glu Glu Asn Ser Val Lys Gln Asn Asp  
                          420                      425                      430  
 Val Asp Met Leu Asn Val Phe Asp Phe Glu Lys Ala Gly Asn Ser Glu  
                          435                      440                      445  
 Pro Asn Glu Leu Lys Asn Glu Ser Glu Val Thr Ile Gln Gln Glu Arg  
                          450                      455                      460  
 Gln Gln Tyr Gln Lys Ala Leu Asp Met Leu Leu Ser Ala Pro Lys Asp  
 465                      470                      475                      480  
 Glu Asn Glu Ile Phe Pro Ser Pro Thr Glu Phe Phe Met Pro Ile Tyr  
                          485                      490                      495  
 Lys Ser Lys His Ser Glu Gly Val Ile Ile Gln Gln Val Asn Asp Glu  
                          500                      505                      510  
 Thr Asn Leu Glu Thr Ser Thr Leu Asp Glu Asn His Pro Ser Ile Ser  
                          515                      520                      525  
 Asp Ser Leu Thr Asp Arg Glu Thr Ser Val Asn Val Ile Glu Gly Asp  
                          530                      535                      540  
 Ser Asp Pro Glu Lys Val Glu Ile Ser Asn Gly Leu Cys Gly Leu Asn  
 545                      550                      555                      560  
 Thr Ser Pro Ser Gln Ser Val Gln Phe Ser Ser Val Lys Gly Asp Asn  
                          565                      570                      575  
 Asn His Asp Met Glu Leu Ser Thr Leu Lys Ile Met Glu Met Ser Ile  
                          580                      585                      590  
 Glu Asp Cys Pro Leu Asp Val  
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&lt;210&gt; 4311

&lt;211&gt; 432

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4311

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 120  
 aaaaacataa ccaactggggc atctgcagca tcccagactc agatgcctac gggccagaca  
 180  
 ggcaactgtg agtccccctt agggagcaag gaggacctca actccaaaga gaacctggat  
 240  
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 300  
 gagactggag gggaaggcga caggcggatt gcgctctctc gagccaactc atcctctttc  
 360  
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 432

&lt;210&gt; 4312

&lt;211&gt; 144

&lt;212&gt; PRT

<213> Homo sapiens

<400> 4312

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His Tyr Asp Val Gln Ser Ile Leu Phe Asn Ile Asn Glu Ala Met Ala
      20           25           30
Thr Arg Ala Asn Val Gly Lys Arg Lys Asn Ile Thr Thr Gly Ala Ser
      35           40           45
Ala Ala Ser Gln Thr Gln Met Pro Thr Gly Gln Thr Gly Asn Cys Glu
      50           55           60
Ser Pro Leu Gly Ser Lys Glu Asp Leu Asn Ser Lys Glu Asn Leu Asp
      65           70           75           80
Ala Asp Glu Gly Asp Gly Lys Ser Asn Asp Leu Val Leu Ser Cys Pro
      85           90           95
Tyr Phe Arg Asn Glu Thr Gly Gly Glu Gly Asp Arg Arg Ile Ala Leu
      100          105          110
Ser Arg Ala Asn Ser Ser Ser Phe Ser Ser Gly Glu Ser Cys Ser Phe
      115          120          125
Glu Ser Ser Leu Ser Ser His Cys Thr Asn Ala Gly Val Ser Val Leu
      130          135          140

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<210> 4313

<211> 936

<212> DNA

<213> Homo sapiens

<400> 4313

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120
attcagtatc caaccatcct ctccattctc ctctggacct caccactctc agagctgctt
180
gtcctggcag aatctacagt tcacccaac tctatgcctt accctccca acccaacagc
240
atttgcagtt tgcaaaatat acagacccaa gtccctgagg gactgaggac atgatgctgg
300
gccaagtct cctgctcagg gcttctctcc aatgccagcc ctgccactcc ttcctcacc
360
tccttgagc ctctctgct gcttgtctat cccaacggcc ctgctccctt cccttctgc
420
ccttcaccag ctttctggga caccatgccc tgaggaaggg acctttggtt ttctctaaac
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600
gggcagatgt cttcacttct cctaccttcc cagtcttggt atcctgtgat gagcaccagg
660
atggcctgt ggtccctaga gcaccttca tgctgtaggg tctgcagcc ccctcctttc
720
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780

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 936

<210> 4314  
 <211> 110  
 <212> PRT  
 <213> Homo sapiens

<400> 4314  
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 Leu Gln Pro His Pro Phe Ser Thr Gly Pro Trp Tyr Pro Gly Ser Ser  
 35 40 45  
 Leu Ser Ser Ala Thr Asp Leu Cys Ala Leu Val Tyr Phe Ser Ala Arg  
 50 55 60  
 Gly Thr His Pro Lys Thr Ile Ser Ser Ser Phe Pro Gly Asp Val Val  
 65 70 75 80  
 Pro Gln Gly Trp Ala Leu Gln Leu Trp Pro Ser Ser Leu Val Leu Pro  
 85 90 95  
 Arg Arg His Gln Ala Ala Gln Asn Glu Val Thr Ala Gly Asn  
 100 105 110

<210> 4315  
 <211> 573  
 <212> DNA  
 <213> Homo sapiens

<400> 4315  
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 180  
 ccgtcaccta ccatccaagc catggccacc tacctgcaa gccatggcca cctaccgcc  
 240  
 aagccatggt cacctaccca ccaagtcatg gtcgcctacc atccaaggag caggcctgga  
 300  
 acagatcctt cccagagcc ctcatgtaga gccaacctg ctgacacctt gatctcagac  
 360  
 ttcaagcctc cagaactgtg ggacaatcct tcaactgtcat ttaatccacc cagcatgtgg  
 420  
 tctcttgta cagttgcatt agccagtga cctaccggg cccttctgca gtcgcctggc  
 480  
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 573

<210> 4316  
 <211> 169  
 <212> PRT  
 <213> Homo sapiens

<400> 4316  
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 Gly His Leu Pro Pro Arg His Gly His Leu Pro Ser Lys Pro Trp Ser  
 35 40 45  
 Pro Ser Pro Ser His Ser His Leu Pro Ser Lys Pro Pro Ser Pro Thr  
 50 55 60  
 Ile Gln Ala Met Ala Thr Tyr Leu Pro Ser His Gly His Leu Pro Ala  
 65 70 75 80  
 Lys Pro Trp Ser Pro Thr His Gln Val Met Val Ala Tyr His Pro Arg  
 85 90 95  
 Ser Arg Pro Gly Thr Asp Pro Ser Pro Glu Pro Ser Val Gly Ala Asn  
 100 105 110  
 Pro Ala Asp Thr Leu Ile Ser Asp Phe Lys Pro Pro Glu Leu Trp Asp  
 115 120 125  
 Asn Pro Ser Leu Ser Phe Asn Pro Pro Ser Met Trp Ser Leu Val Thr  
 130 135 140  
 Val Ala Leu Ala Ser Glu Pro Thr Arg Ala Leu Leu Gln Ser Pro Gly  
 145 150 155 160  
 Ser Gly Val Val Leu Val Arg Lys Phe  
 165

<210> 4317  
 <211> 744  
 <212> DNA  
 <213> Homo sapiens

<400> 4317  
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 180  
 tgtagcagct acttcagagc tatgttttgt aatgaccaca gggaaagccg agaaatgttg  
 240  
 gttgagatca atgggtatctt agctgaagct atggaatgtt ttttgagta tgtttatact  
 300  
 ggaaagggtga agatcactac agagaatgta cagtatctct ttgagacatc aagcctcttt  
 360  
 cagattagtg ttctccgtga tgcattgtgcc aagttcttgg aggagcaact tgatccttgt  
 420  
 aattgcttag gaatccagcg ctttgctgat acccattcac tcaaaacact cttcacaaaa  
 480  
 tgcaaaaatt ttgcgttaca gacttttgag gatgtatccc agcacgaaga atttcttgag  
 540



cttgacaaag atgaacttat tgattatatt thtagtgatg aacttggtat tggtaaagag  
 600  
 gagatgggtt ttgaagccgt catgcgttgg gtctatcgtg ccgttgatct gagaagacca  
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 744

<210> 4318  
 <211> 239  
 <212> PRT  
 <213> Homo sapiens

<400> 4318  
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 Ile Leu Gln Ile Phe Asn Glu Phe Arg Asp Ser Arg Leu Phe Thr Asp  
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 Val Ile Ile Trp Val Glu Gly Lys Glu Phe Pro Cys His Arg Ala Val  
 35 40 45  
 Leu Ser Ala Cys Ser Ser Tyr Phe Arg Ala Met Phe Cys Asn Asp His  
 50 55 60  
 Arg Glu Ser Arg Glu Met Leu Val Glu Ile Asn Gly Ile Leu Ala Glu  
 65 70 75 80  
 Ala Met Glu Cys Phe Leu Gln Tyr Val Tyr Thr Gly Lys Val Lys Ile  
 85 90 95  
 Thr Thr Glu Asn Val Gln Tyr Leu Phe Glu Thr Ser Ser Leu Phe Gln  
 100 105 110  
 Ile Ser Val Leu Arg Asp Ala Cys Ala Lys Phe Leu Glu Glu Gln Leu  
 115 120 125  
 Asp Pro Cys Asn Cys Leu Gly Ile Gln Arg Phe Ala Asp Thr His Ser  
 130 135 140  
 Leu Lys Thr Leu Phe Thr Lys Cys Lys Asn Phe Ala Leu Gln Thr Phe  
 145 150 155 160  
 Glu Asp Val Ser Gln His Glu Glu Phe Leu Glu Leu Asp Lys Asp Glu  
 165 170 175  
 Leu Ile Asp Tyr Ile Cys Ser Asp Glu Leu Val Ile Gly Lys Glu Glu  
 180 185 190  
 Met Val Phe Glu Ala Val Met Arg Trp Val Tyr Arg Ala Val Asp Leu  
 195 200 205  
 Arg Arg Pro Leu Leu His Glu Leu Leu Thr His Val Arg Leu Pro Leu  
 210 215 220  
 Leu His Pro Asn Tyr Phe Val Gln Thr Val Glu Val Asp Gln Leu  
 225 230 235

<210> 4319  
 <211> 388  
 <212> DNA  
 <213> Homo sapiens

<400> 4319  
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 120  
 gcagtcgcaa gtgactcttg caataatagc atctcactcc tatctgaaaa gttgacaagc  
 180  
 agctgttccc cccatcatat caagagaagt gtagtggaag ctatgcaacg ccaagctcgg  
 240  
 aaaatgtgca attacgacaa aatcttg gcc acaaagaaaa acctagacca tgtcaataaa  
 300  
 atcttaaaag ccaaaaaact tcaaaggcag gccaggacag ggaataactt tgtgaaacgt  
 360  
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 388

<210> 4320

<211> 129

<212> PRT

<213> Homo sapiens

<400> 4320

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Pro	Ser	Ser	Ser	Pro	Gly	Arg	Ser	His	Ser	Lys	Asp	Arg	Thr	Leu	Gly
			20					25					30		
Lys	Pro	Asp	Ser	Leu	Leu	Val	Pro	Ala	Val	Ala	Ser	Asp	Ser	Cys	Asn
			35				40					45			
Asn	Ser	Ile	Ser	Leu	Leu	Ser	Glu	Lys	Leu	Thr	Ser	Ser	Cys	Ser	Pro
		50				55				60					
His	His	Ile	Lys	Arg	Ser	Val	Val	Glu	Ala	Met	Gln	Arg	Gln	Ala	Arg
65					70					75					80
Lys	Met	Cys	Asn	Tyr	Asp	Lys	Ile	Leu	Ala	Thr	Lys	Lys	Asn	Leu	Asp
			85						90					95	
His	Val	Asn	Lys	Ile	Leu	Lys	Ala	Lys	Lys	Leu	Gln	Arg	Gln	Ala	Arg
			100					105						110	
Thr	Gly	Asn	Asn	Phe	Val	Lys	Arg	Arg	Pro	Gly	Arg	Pro	Arg	Ser	Glu
			115				120						125		

Arg

<210> 4321

<211> 278

<212> DNA

<213> Homo sapiens

<400> 4321

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 120  
 cgtccccgtg gaaggcagcc ctgggcggaa ccaggcggtt taacggctca ctaggcagcc  
 180  
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 240  
 gccgcctgc ccccatcccc tccaggccac gttttaga  
 278

<210> 4322  
 <211> 85  
 <212> PRT  
 <213> Homo sapiens

<400> 4322  
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 His Val Leu Ile Cys Ser Pro Asp Leu Gly Leu Pro Ser Glu Pro Leu  
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 Asn Ala Trp Val Pro Pro Arg Ala Ala Phe His Arg Asp Ala Gly Pro  
 35 40 45  
 Ala Val Ala Gly Pro Cys Arg Cys Gly Gly Leu Leu Thr Lys Glu Pro  
 50 55 60  
 Gly Leu Ala Ala Trp Asn Asn Leu Gln Val Gly Val Leu Arg Gly Leu  
 65 70 75 80  
 Trp Gln Val Leu Gly  
 85

<210> 4323  
 <211> 1542  
 <212> DNA  
 <213> Homo sapiens

<400> 4323  
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 120  
 gacgagaaga ttgaggtgga tgacccccct gacaaggagg acatgcatc aagcttcagg  
 180  
 tcgaatgtgt tgacgggggtc ggctccccag caggactacg ataagctgaa ggcaactcga  
 240  
 ggggaaaact ccagcaaaac tggactctct acgtcaggca atgtggagaa aaacaaagct  
 300  
 gttaagagag aaacagaagc cagttctata aacctgagtg tttatgaacc ttttaaagtc  
 360  
 agaaaaagcag aggataaatt gaaggaaagc tctgacaagg tgctggaaaa cagagtccta  
 420  
 gatgggaagc tgagctccga gaagaatgac accagcctcc ccagcgttgc gccatcaaa  
 480  
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 720  
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 780  
 gtccgcataa aaaccattaa gacatcttct ggggaaatca agagaacagt gaccagggtta  
 840

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 960  
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 1020  
 aaacaggtca caatcaagcc tgtggctact gctttcctcc cagtgtctgc tgtgaagacg  
 1080  
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 1200  
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 1260  
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 1320  
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 1380  
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 1440  
 gtggaagctt tcaacaaggt gctgagcagt gtcaatccag tccctgttta catcccaaac  
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 1542

&lt;210&gt; 4324

&lt;211&gt; 514

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4324

Xaa	Tyr	Ser	Lys	Asp	Gly	Ala	Lys	Ser	Leu	Lys	Gly	Asp	Val	Pro	Ala
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Ser	Glu	Val	Thr	Leu	Lys	Asp	Ser	Thr	Phe	Ser	Gln	Phe	Ser	Pro	Ile
			20					25					30		
Ser	Ser	Ala	Glu	Glu	Phe	Asp	Asp	Asp	Glu	Lys	Ile	Glu	Val	Asp	Asp
		35					40					45			
Pro	Pro	Asp	Lys	Glu	Asp	Met	Arg	Ser	Ser	Phe	Arg	Ser	Asn	Val	Leu
	50					55				60					
Thr	Gly	Ser	Ala	Pro	Gln	Gln	Asp	Tyr	Asp	Lys	Leu	Lys	Ala	Leu	Gly
65					70				75					80	
Gly	Glu	Asn	Ser	Ser	Lys	Thr	Gly	Leu	Ser	Thr	Ser	Gly	Asn	Val	Glu
			85					90					95		
Lys	Asn	Lys	Ala	Val	Lys	Arg	Glu	Thr	Glu	Ala	Ser	Ser	Ile	Asn	Leu
			100					105					110		
Ser	Val	Tyr	Glu	Pro	Phe	Lys	Val	Arg	Lys	Ala	Glu	Asp	Lys	Leu	Lys
		115				120					125				
Glu	Ser	Ser	Asp	Lys	Val	Leu	Glu	Asn	Arg	Val	Leu	Asp	Gly	Lys	Leu
	130					135				140					
Ser	Ser	Glu	Lys	Asn	Asp	Thr	Ser	Leu	Pro	Ser	Val	Ala	Pro	Ser	Lys
145				150					155					160	
Thr	Lys	Ser	Ser	Ser	Lys	Leu	Ser	Ser	Cys	Ile	Ala	Ala	Ile	Ala	Ala
			165					170					175		
Leu	Ser	Ala	Lys	Lys	Ala	Ala	Ser	Asp	Ser	Cys	Lys	Glu	Pro	Val	Ala

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      180      185      190
Asn Ser Arg Glu Ser Ser Pro Leu Pro Lys Glu Val Asn Asp Ser Pro
      195      200      205
Arg Ala Ala Asp Lys Ser Pro Glu Ser Gln Asn Leu Ile Asp Gly Thr
      210      215      220
Lys Lys Pro Ser Leu Lys Gln Pro Asp Ser Pro Arg Ser Ile Ser Ser
225      230      235      240
Glu Asn Ser Ser Lys Gly Ser Pro Ser Ser Pro Ala Gly Ser Thr Pro
      245      250      255
Ala Ile Pro Lys Val Arg Ile Lys Thr Ile Lys Thr Ser Ser Gly Glu
      260      265      270
Ile Lys Arg Thr Val Thr Arg Val Leu Pro Glu Val Asp Leu Asp Ser
      275      280      285
Gly Lys Lys Pro Ser Glu Gln Thr Ala Ser Val Met Ala Ser Val Thr
      290      295      300
Ser Leu Leu Ser Ser Pro Ala Ser Ala Ala Val Leu Ser Ser Pro Pro
305      310      315      320
Arg Ala Pro Leu Gln Ser Ala Val Val Thr Asn Ala Val Ser Pro Ala
      325      330      335
Glu Leu Thr Pro Lys Gln Val Thr Ile Lys Pro Val Ala Thr Ala Phe
      340      345      350
Leu Pro Val Ser Ala Val Lys Thr Ala Gly Ser Gln Val Ile Asn Leu
      355      360      365
Lys Leu Ala Asn Asn Thr Thr Val Lys Ala Thr Val Ile Ser Ala Ala
      370      375      380
Ser Val Gln Ser Ala Ser Ser Ala Ile Ile Lys Ala Ala Asn Ala Ile
385      390      395      400
Gln Gln Gln Thr Val Val Val Pro Ala Ser Ser Leu Ala Asn Ala Lys
      405      410      415
Leu Val Pro Lys Thr Val His Leu Ala Asn Leu Asn Leu Leu Pro Gln
      420      425      430
Gly Ala Gln Ala Thr Ser Glu Leu Arg Gln Val Leu Thr Lys Pro Gln
      435      440      445
Gln Gln Ile Lys Gln Ala Ile Ile Asn Ala Ala Ala Ser Gln Pro Pro
      450      455      460
Lys Lys Val Ser Arg Val Gln Val Val Ser Ser Leu Gln Ser Ser Val
465      470      475      480
Val Glu Ala Phe Asn Lys Val Leu Ser Ser Val Asn Pro Val Pro Val
      485      490      495
Tyr Ile Pro Asn Leu Ser Pro Pro Ala Asn Ala Gly Ile Thr Leu Pro
      500      505      510
Thr Arg

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&lt;210&gt; 4325

&lt;211&gt; 1405

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4325

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60
cttctgcagg gactgtttca aggcctteta cgtccacaag ttcatagccca tgctgggcaa
120

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 180  
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 240  
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 360  
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 420  
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 1405

&lt;210&gt; 4326

&lt;211&gt; 336

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4326

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 Ser Ser Ser Met Val Trp Gln Val Leu Glu Gly Leu Ser Gln Asp Ser

	20		25		30										
Ala	Lys	Arg	Leu	Arg	Phe	Val	Ala	Gly	Val	Ile	Phe	Val	Asp	Glu	Gly
	35		40		45										
Ala	Ala	Cys	Gly	Gln	Ser	Leu	Glu	Glu	Arg	Ser	Lys	Thr	Leu	Ala	Glu
	50		55		60										
Val	Lys	Pro	Ile	Leu	Gln	Ala	Thr	Gly	Phe	Pro	Trp	His	Val	Val	Ala
	65		70		75										80
Leu	Glu	Glu	Val	Phe	Ser	Leu	Pro	Pro	Ser	Val	Leu	Trp	Cys	Ser	Ala
			85		90									95	
Gln	Glu	Leu	Val	Gly	Ser	Glu	Gly	Ala	Tyr	Lys	Ala	Ala	Val	Asp	Ser
			100		105									110	
Phe	Leu	Gln	Gln	Gln	Tyr	Val	Leu	Gly	Ala	Gly	Gly	Gly	Pro	Gly	Pro
			115		120									125	
Thr	Gln	Gly	Glu	Glu	Gln	Pro	Pro	Gln	Pro	Pro	Leu	Asp	Pro	Gln	Asn
			130		135									140	
Leu	Ala	Arg	Pro	Pro	Ala	Pro	Ala	Gln	Thr	Glu	Ala	Leu	Ser	Gln	Leu
			145		150					155					160
Phe	Cys	Ser	Val	Arg	Thr	Leu	Thr	Ala	Lys	Glu	Glu	Leu	Leu	Gln	Thr
			165		170									175	
Leu	Arg	Thr	His	Leu	Ile	Leu	His	Met	Ala	Arg	Ala	His	Gly	Tyr	Ser
			180		185									190	
Lys	Val	Met	Thr	Gly	Asp	Ser	Cys	Thr	Arg	Leu	Ala	Ile	Lys	Leu	Met
			195		200									205	
Thr	Asn	Leu	Ala	Leu	Gly	Arg	Gly	Ala	Phe	Leu	Ala	Trp	Asp	Thr	Gly
			210		215									220	
Phe	Ser	Asp	Glu	Arg	His	Gly	Asp	Val	Val	Val	Val	Arg	Pro	Met	Arg
			225		230									235	240
Asp	His	Thr	Leu	Lys	Glu	Val	Ala	Phe	Tyr	Asn	Arg	Leu	Phe	Ser	Val
			245		250									255	
Pro	Ser	Val	Phe	Thr	Pro	Ala	Val	Asp	Thr	Lys	Ala	Pro	Glu	Lys	Ala
			260		265									270	
Ser	Ile	His	Arg	Leu	Met	Glu	Ala	Phe	Ile	Leu	Arg	Leu	Gln	Thr	Gln
			275		280									285	
Phe	Pro	Ser	Thr	Val	Ser	Thr	Val	Tyr	Arg	Cys	Val	Trp	Val	Cys	Ala
			290		295									300	
Gly	Gly	Ala	Arg	Val	Cys	Ala	Val	Cys	Gly	Cys	Val	Arg	Val	Val	Ser
			305		310					315					320
Ser	Pro	Leu	Val	Leu	Arg	Pro	Gly	Leu	Arg	Val	Glu	Pro	Gln	Pro	Val
			325		330									335	

&lt;210&gt; 4327

&lt;211&gt; 551

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4327

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 180  
 aggggcaagc agggctcacc ctgactggct cacttcccag gcaccccat gagcccaggc  
 240

accgcctgcc accctcactc tccaggaaga gccaccgcgt ggtggccggg atcgtgtggt  
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 360  
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 480  
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 551

<210> 4328

<211> 107

<212> PRT

<213> Homo sapiens

<400> 4328

Met	Pro	Ser	Arg	Val	Gln	Ala	Pro	Ser	Trp	Gln	Ala	Arg	Ala	Val	Gly
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Val	Thr	Leu	Leu	Ser	Gln	Arg	Trp	Val	Cys	Pro	Ile	Val	Val	Ser	Arg
		20						25					30		
Ala	Thr	Ser	Ser	Pro	Trp	Leu	Cys	Gly	Leu	Ser	Val	Ser	His	Pro	Gln
		35					40					45			
His	Leu	Asp	Gly	Leu	Arg	Val	Arg	Ala	Lys	Val	Arg	Arg	Pro	Gly	His
	50					55				60					
His	Thr	Ile	Pro	Ala	Thr	Thr	Arg	Trp	Leu	Phe	Leu	Glu	Ser	Glu	Gly
65					70				75					80	
Gly	Arg	Arg	Cys	Leu	Gly	Ser	Trp	Gly	Cys	Leu	Gly	Ser	Glu	Pro	Val
			85						90					95	
Arg	Val	Ser	Pro	Ala	Cys	Pro	Ser	Ile	Ser	Trp					
			100						105						

<210> 4329

<211> 3192

<212> DNA

<213> Homo sapiens

<400> 4329

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 120  
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 180  
 gcttggctcag caagatgact ttatgtctaa agctcagact gataaggaga cttcagaaga  
 240  
 gaagccgcca gctggaggaa gggaggaccc ttagaagcca ccccgccctc aggaggaaca  
 300  
 agatctagcc agcgagatca gatactctat ctctttggga gaactggccg agaaaaagag  
 360  
 gaatggttta ggagatttat tctggcatct aagctaaagt cggaatcaa gaagtcacg  
 420



ggtgtctctg gaggtaaacc agggcttttg cctgcacaca gcagacacaa cagtccgtcc  
480  
gggcacctga cccacagccg cagcagcagc aaaggcagtg tggaggagat catgtcacag  
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aaatactggt ctgatctggt gtctaagaag atccaaatga aactcagcaa aataaagctc  
840  
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900  
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960  
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1020  
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1080  
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<210> 4330

<211> 371

<212> PRT

<213> Homo sapiens

<400> 4330

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		20						25					30		
Ser	Arg	Ser	Pro	Gln	Arg	Ser	Pro	Leu	Gln	Ser	Ala	Glu	Ser	Ser	Pro
		35					40				45				
Thr	Ala	Gly	Lys	Lys	Leu	Pro	Glu	Val	Pro	Pro	Ser	Glu	Glu	Glu	Glu

50                      55                      60  
 Gln Glu Ala Trp Val Asn Ala Leu Leu Gly Arg Ile Phe Trp Asp Phe  
 65                      70                      75                      80  
 Leu Gly Glu Lys Tyr Trp Ser Asp Leu Val Ser Lys Lys Ile Gln Met  
                     85                      90                      95  
 Lys Leu Ser Lys Ile Lys Leu Pro Tyr Phe Met Asn Glu Leu Thr Leu  
                     100                      105                      110  
 Thr Glu Leu Asp Met Gly Val Ala Val Pro Lys Ile Leu Gln Ala Phe  
                     115                      120                      125  
 Lys Pro Tyr Val Asp His Gln Gly Leu Trp Ile Asp Leu Glu Met Ser  
                     130                      135                      140  
 Tyr Asn Gly Ser Phe Leu Met Thr Leu Glu Thr Lys Met Asn Leu Pro  
 145                      150                      155                      160  
 Lys Leu Gly Lys Glu Pro Leu Val Glu Ala Leu Lys Val Gly Glu Ile  
                     165                      170                      175  
 Gly Lys Glu Gly Cys Arg Pro Arg Ala Phe Cys Leu Ala Asp Ser Asp  
                     180                      185                      190  
 Glu Glu Ser Ser Ser Ala Gly Ser Ser Glu Glu Asp Asp Ala Pro Glu  
                     195                      200                      205  
 Pro Ala Gly Glu Thr Asn Ser Ser Ser Gln Gly Glu Gly Tyr Val Gly  
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 Gly His Arg Thr Ser Lys Ile Met Arg Phe Val Asp Lys Ile Thr Lys  
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 Ser Lys Tyr Phe Gln Lys Ala Thr Glu Thr Glu Phe Ile Lys Arg Xaa  
                     245                      250                      255  
 Ile Glu Glu Val Ser Asn Thr Pro Leu Leu Leu Thr Val Glu Val Gln  
                     260                      265                      270  
 Glu Cys Arg Gly Thr Leu Ala Val Asn Ile Pro Pro Pro Pro Thr Asp  
                     275                      280                      285  
 Arg Val Trp Tyr Gly Phe Arg Lys Pro Pro His Val Glu Leu Lys Ala  
 290                      295                      300  
 Arg Pro Lys Leu Gly Glu Arg Glu Val Thr Leu Val His Val Thr Asp  
 305                      310                      315                      320  
 Trp Ile Glu Lys Lys Leu Glu Gln Glu Phe Gln Lys Val Phe Val Met  
                     325                      330                      335  
 Pro Asn Met Asp Asp Val Tyr Ile Thr Ile Met His Ser Ala Met Asp  
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 Pro Arg Ser Thr Ser Cys Leu Leu Lys Asp Pro Pro Val Glu Ala Ala  
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 Asp Arg Pro  
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&lt;210&gt; 4331

&lt;211&gt; 1355

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4331

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 180

gtatattgta ttccatttgc agaagaggac ttatcagcag atgccctctt gaatattctt  
 240  
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 300  
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 360  
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 660  
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 720  
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 1355

<210> 4332

<211> 345

<212> PRT

<213> Homo sapiens

<400> 4332

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			20					25					30		
Arg	Pro	Pro	Ser	Pro	Ile	Lys	Phe	Asp	Leu	Asn	Glu	Pro	Leu	His	Leu
			35				40					45			
Ser	Phe	Leu	Gln	Asn	Ala	Ala	Lys	Leu	Tyr	Ala	Thr	Val	Tyr	Cys	Ile

50	55	60
Pro Phe Ala Glu Glu Asp Leu Ser Ala Asp Ala Leu Leu Asn Ile Leu		
65	70	75
Ser Glu Val Lys Ile Gln Glu Phe Lys Pro Ser Asn Lys Val Val Gln		80
	85	90
Thr Asp Glu Thr Ala Arg Lys Pro Asp His Val Pro Ile Ser Ser Glu		95
	100	105
Asp Glu Arg Asn Ala Ile Phe Gln Leu Glu Lys Ala Ile Leu Ser Asn		110
	115	120
Glu Ala Thr Lys Ser Asp Leu Gln Met Ala Val Leu Ser Phe Glu Lys		125
	130	135
Asp Asp Asp His Asn Gly His Ile Asp Phe Ile Thr Ala Ala Ser Asn		140
145	150	155
Leu Arg Ala Lys Met Tyr Ser Ile Glu Pro Ala Asp Arg Phe Lys Thr		160
	165	170
Lys Arg Ile Ala Gly Lys Ile Ile Pro Ala Ile Ala Thr Thr Thr Ala		175
	180	185
Thr Val Ser Gly Leu Val Ala Leu Glu Met Ile Lys Val Thr Gly Gly		190
	195	200
Tyr Pro Phe Glu Ala Tyr Lys Asn Cys Phe Leu Asn Leu Ala Ile Pro		205
	210	215
Ile Val Val Phe Thr Glu Thr Thr Glu Val Arg Lys Thr Lys Ile Arg		220
225	230	235
Asn Gly Ile Ser Phe Thr Ile Trp Asp Arg Trp Thr Val His Gly Lys		240
	245	250
Glu Asp Phe Thr Leu Leu Asp Phe Ile Asn Ala Val Lys Glu Lys Tyr		255
	260	265
Gly Ile Glu Pro Thr Met Val Val Gln Gly Val Lys Met Leu Tyr Val		270
	275	280
Pro Val Met Pro Gly His Ala Lys Arg Leu Lys Leu Thr Met His Lys		285
	290	295
Leu Val Lys Pro Thr Thr Glu Lys Lys Tyr Val Asp Leu Thr Val Ser		300
305	310	315
Phe Ala Pro Asp Ile Asp Gly Asp Glu Asp Leu Pro Gly Pro Pro Val		320
	325	330
Arg Tyr Tyr Phe Ser His Asp Thr Asp		335
	340	345

&lt;210&gt; 4333

&lt;211&gt; 1278

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4333

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 300

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1278

&lt;210&gt; 4334

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4334

Arg	Pro	Gln	Arg	Arg	Leu	Leu	Ser	Ala	Arg	Val	Asn	Arg	Ser	Gln	Ser
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Phe	Ala	Gly	Val	Leu	Gly	Ser	His	Glu	Arg	Gly	Pro	Arg	Ser	Phe	Pro
		20						25					30		
Val	Phe	Ser	Pro	Pro	Gly	Pro	Pro	Arg	Lys	Pro	Pro	Ala	Leu	Ser	Arg
		35					40					45			
Val	Ser	Arg	Met	Phe	Ser	Val	Ala	His	Pro	Ala	Ala	Lys	Val	Pro	Gln
		50				55					60				
Pro	Glu	Arg	Leu	Asp	Leu	Val	Tyr	Thr	Ala	Leu	Lys	Arg	Gly	Leu	Thr
65					70					75				80	
Ala	Tyr	Leu	Glu	Val	His	Gln	Gln	Glu	Gln	Glu	Lys	Leu	Gln	Gly	Gln
				85					90				95		
Ile	Arg	Glu	Ser	Lys	Arg	Asn	Ser	Arg	Leu	Gly	Phe	Leu	Tyr	Asp	Leu

3528

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<210> 4336  
 <211> 325  
 <212> PRT  
 <213> Homo sapiens

<400> 4336  
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 Leu Gly Ala Ala Leu Val Asn Val Gln Ile Pro Leu Leu Leu Gly Gln  
 35 40 45  
 Leu Val Glu Val Val Ala Lys Tyr Thr Arg Asp His Val Gly Ser Phe  
 50 55 60  
 Met Thr Glu Ser Gln Asn Leu Ser Thr His Leu Leu Ile Leu Tyr Gly  
 65 70 75 80  
 Val Gln Gly Leu Leu Thr Phe Gly Tyr Leu Val Leu Leu Ser His Val  
 85 90 95  
 Gly Glu Arg Met Ala Val Asp Met Arg Arg Ala Leu Phe Ser Ser Leu  
 100 105 110  
 Leu Arg Gln Asp Ile Thr Phe Phe Asp Ala Asn Lys Thr Gly Gln Leu  
 115 120 125  
 Val Ser Arg Leu Thr Thr Asp Val Gln Glu Phe Lys Ser Ser Phe Lys  
 130 135 140  
 Leu Val Ile Ser Gln Gly Leu Arg Ser Cys Thr Gln Val Ala Gly Cys  
 145 150 155 160  
 Leu Val Ser Leu Ser Met Leu Ser Thr Arg Leu Thr Leu Leu Leu Met  
 165 170 175  
 Val Ala Thr Pro Ala Leu Met Gly Val Gly Thr Leu Met Gly Ser Gly  
 180 185 190  
 Leu Arg Lys Leu Ser Arg Gln Cys Gln Glu Gln Ile Ala Arg Ala Met  
 195 200 205  
 Gly Val Ala Asp Glu Ala Leu Gly Asn Val Arg Thr Val Arg Ala Phe  
 210 215 220  
 Ala Met Glu Gln Arg Glu Glu Glu Arg Tyr Gly Ala Glu Leu Glu Ala  
 225 230 235 240  
 Cys Arg Cys Arg Ala Glu Glu Leu Gly Arg Gly Ile Ala Leu Phe Gln  
 245 250 255  
 Gly Leu Ser Asn Ile Ala Phe Asn Cys Met Val Leu Gly Thr Leu Phe  
 260 265 270  
 Ile Gly Gly Ser Leu Val Ala Gly Gln Gln Leu Thr Gly Gly Asp Leu  
 275 280 285  
 Met Ser Phe Leu Val Ala Ser Gln Thr Val Gln Ser Phe Leu Arg Val  
 290 295 300  
 Ala Pro Cys Pro Asn Ser Leu Pro Leu Gln Ala Val Thr Leu His Ala  
 305 310 315 320  
 Trp Lys Asp His Pro



325

&lt;210&gt; 4337

&lt;211&gt; 461

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4337

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 240  
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 420  
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 461

&lt;210&gt; 4338

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4338

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 Ala Ser Ser Ala Pro Gly Asp Pro Ser Leu Gly Val Gly Arg Thr Ser  
 20 25 30  
 Thr Trp Phe Pro Ser Ser Gly Ala His Gly Gly Glu Val Glu Gly Gly  
 35 40 45  
 Arg Arg Glu Gly Ala Thr Cys Cys Ser Val Glu Lys Gln Gln Ser Pro  
 50 55 60  
 Leu Gln Pro Ala Gln Leu Ala Phe Leu Thr Leu Ser Leu Pro Gly Leu  
 65 70 75 80  
 Cys Gly Arg Glu Gly Gln Ala Arg Trp Pro Ala Arg Asp Val Val Phe  
 85 90 95  
 Ser Phe Val Leu Cys Thr Met Pro Gln Lys Asn Ile Leu Leu Ile Cys  
 100 105 110  
 Asn Gln Asp Asn Ile Ile  
 115

&lt;210&gt; 4339

&lt;211&gt; 5269

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4339

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<210> 4340

<211> 1088

<212> PRT

<213> Homo sapiens

<400> 4340

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		20					25						30		
Gly	Pro	Glu	Pro	Glu	Arg	Pro	Ser	Pro	Gly	Asp	Gly	Asn	Pro	Arg	Glu
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Asn	Ser	Pro	Phe	Leu	Asn	Asn	Val	Glu	Val	Glu	Gln	Glu	Ser	Phe	Phe
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Glu	Gly	Lys	Asn	Met	Ala	Leu	Phe	Glu	Glu	Glu	Met	Asp	Ser	Asn	Pro
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Met	Val	Ser	Ser	Leu	Leu	Asn	Lys	Leu	Ala	Asn	Tyr	Thr	Asn	Leu	Ser
			85						90					95	
Gln	Gly	Val	Val	Glu	His	Glu	Glu	Asp	Glu	Glu	Ser	Arg	Arg	Arg	Glu
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Ala	Lys	Ala	Pro	Arg	Met	Gly	Thr	Phe	Ile	Gly	Val	Tyr	Leu	Pro	Cys
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Leu	Gln	Asn	Ile	Leu	Gly	Val	Ile	Leu	Phe	Leu	Arg	Leu	Thr	Trp	Ile
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Val	Gly	Val	Ala	Gly	Val	Leu	Glu	Ser	Phe	Leu	Ile	Val	Ala	Met	Cys
145					150					155					160
Cys	Thr	Cys	Thr	Met	Leu	Thr	Ala	Ile	Ser	Met	Ser	Ala	Ile	Ala	Thr
			165					170						175	
Asn	Gly	Val	Val	Pro	Ala	Gly	Gly	Ser	Tyr	Tyr	Met	Ile	Ser	Arg	Ser
		180						185					190		
Leu	Gly	Pro	Glu	Phe	Gly	Gly	Ala	Val	Gly	Leu	Cys	Phe	Tyr	Leu	Gly
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Thr	Thr	Phe	Ala	Gly	Ala	Met	Tyr	Ile	Leu	Gly	Thr	Ile	Glu	Ile	Phe
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Leu	Thr	Tyr	Ile	Ser	Pro	Gly	Ala	Ala	Ile	Phe	Gln	Ala	Glu	Ala	Ala
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Gly	Gly	Glu	Ala	Ala	Met	Leu	His	Asn	Met	Arg	Val	Tyr	Gly	Thr	
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Cys	Thr	Leu	Val	Leu	Met	Ala	Leu	Val	Val	Phe	Val	Gly	Val	Lys	Tyr

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Val Asn Lys Leu Ala Leu Val Phe Leu Ala Cys Val Val Leu Ser Ile
      275      280      285
Leu Ala Ile Tyr Ala Gly Val Ile Lys Ser Ala Phe Asp Pro Pro Asp
      290      295      300
Ile Pro Val Cys Leu Leu Gly Asn Arg Thr Leu Ser Arg Arg Ser Phe
      305      310      315      320
Asp Ala Cys Val Lys Ala Tyr Gly Ile His Asn Asn Ser Ala Thr Ser
      325      330      335
Ala Leu Trp Gly Leu Phe Cys Asn Gly Ser Gln Pro Ser Ala Ala Cys
      340      345      350
Asp Glu Tyr Phe Ile Gln Asn Asn Val Thr Glu Ile Gln Gly Ile Pro
      355      360      365
Gly Ala Ala Ser Gly Val Phe Leu Glu Asn Leu Trp Ser Thr Tyr Ala
      370      375      380
His Ala Gly Ala Phe Val Glu Lys Lys Gly Val Pro Ser Val Pro Val
      385      390      395      400
Ala Glu Glu Ser Arg Ala Ser Ala Leu Pro Tyr Val Leu Thr Asp Ile
      405      410      415
Ala Ala Ser Phe Thr Leu Leu Val Gly Ile Tyr Phe Pro Ser Val Thr
      420      425      430
Gly Ile Met Ala Gly Ser Asn Arg Ser Gly Asp Leu Lys Asp Ala Gln
      435      440      445
Lys Ser Ile Pro Thr Gly Thr Ile Leu Ala Ile Val Thr Thr Ser Phe
      450      455      460
Ile Tyr Leu Ser Cys Ile Val Leu Phe Gly Ala Cys Ile Glu Gly Val
      465      470      475      480
Val Leu Arg Asp Lys Phe Gly Glu Ala Leu Gln Gly Asn Leu Val Ile
      485      490      495
Gly Met Leu Ala Trp Pro Ser Pro Trp Val Ile Val Ile Gly Ser Phe
      500      505      510
Phe Ser Thr Cys Gly Ala Gly Leu Gln Thr Leu Thr Gly Ala Pro Arg
      515      520      525
Leu Leu Gln Ala Ile Ala Arg Asp Gly Ile Val Pro Phe Leu Gln Val
      530      535      540
Phe Gly His Gly Lys Ala Asn Gly Glu Pro Thr Trp Ala Leu Leu Leu
      545      550      555      560
Thr Val Leu Ile Cys Glu Thr Gly Ile Leu Ile Ala Ser Leu Asp Ser
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Val Ala Pro Ile Leu Ser Met Phe Phe Leu Met Cys Tyr Leu Phe Val
      580      585      590
Asn Leu Ala Cys Ala Val Gln Thr Leu Leu Arg Thr Pro Asn Trp Arg
      595      600      605
Pro Arg Phe Lys Phe Tyr His Trp Thr Leu Ser Phe Leu Gly Met Ser
      610      615      620
Leu Cys Leu Ala Leu Met Phe Ile Cys Ser Trp Tyr Tyr Ala Leu Ser
      625      630      635      640
Ala Met Leu Ile Ala Gly Cys Ile Tyr Lys Tyr Ile Glu Tyr Arg Gly
      645      650      655
Ala Glu Lys Glu Trp Gly Asp Gly Ile Arg Gly Leu Ser Leu Asn Ala
      660      665      670
Ala Arg Tyr Ala Leu Leu Arg Val Glu His Gly Pro Pro His Thr Lys
      675      680      685
Asn Trp Arg Pro Gln Val Leu Val Met Leu Asn Leu Asp Ala Glu Gln

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690	695	700
Ala Val Lys His Pro Arg Leu Leu Ser Phe Thr Ser Gln Leu Lys Ala		
705	710	715
Gly Lys Gly Leu Thr Ile Val Gly Ser Val Leu Glu Gly Thr Tyr Leu		720
	725	730
Asp Lys His Met Glu Ala Gln Arg Ala Glu Glu Asn Ile Arg Ser Leu		735
	740	745
Met Ser Thr Glu Lys Thr Lys Gly Phe Cys Gln Leu Val Val Ser Ser		750
	755	760
Ser Leu Arg Asp Gly Met Ser His Leu Ile Gln Ser Ala Gly Leu Gly		765
	770	775
Gly Leu Lys His Asn Thr Val Leu Met Ala Trp Pro Ala Ser Trp Lys		780
785	790	795
Gln Glu Asp Asn Pro Phe Ser Trp Lys Asn Phe Val Asp Thr Val Arg		800
	805	810
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Ser Phe Pro Gln Asn Gln Glu Arg Phe Gly Gly Gly His Ile Asp Val		830
	835	840
Trp Trp Ile Val His Asp Gly Gly Met Leu Met Leu Leu Pro Phe Leu		845
	850	855
Leu Arg Gln His Lys Val Trp Arg Lys Cys Arg Met Arg Ile Phe Thr		860
865	870	875
Val Ala Gln Val Asp Asn Ser Ile Gln Met Lys Lys Asp Leu Gln		880
	885	890
Met Phe Leu Tyr His Leu Arg Ile Ser Ala Glu Val Glu Val Val Glu		895
	900	905
Met Val Glu Asn Asp Ile Ser Ala Phe Thr Tyr Glu Arg Thr Leu Met		910
	915	920
Met Glu Gln Arg Ser Gln Met Leu Lys Gln Met Gln Leu Ser Lys Asn		925
	930	935
Glu Gln Glu Arg Glu Ala Gln Leu Ile His Asp Arg Asn Thr Ala Ser		940
945	950	955
His Thr Ala Ala Ala Ala Arg Thr Gln Ala Pro Pro Thr Pro Asp Lys		960
	965	970
Val Gln Met Thr Trp Thr Arg Glu Lys Leu Ile Ala Glu Lys Tyr Arg		975
	980	985
Ser Arg Asp Thr Ser Leu Ser Gly Phe Lys Asp Leu Phe Ser Met Lys		990
	995	1000
Pro Glu Trp Gly Asn Leu Asp Gln Ser Asn Val Arg Arg Met His Thr		1005
	1010	1015
Ala Val Lys Leu Asn Gly Val Val Leu Asn Lys Ser Gln Asp Ala Gln		1020
1025	1030	1035
Leu Val Leu Leu Asn Met Pro Gly Pro Pro Lys Asn Arg Gln Gly Asp		1040
	1045	1050
Glu Asn Tyr Met Glu Phe Leu Glu Val Leu Thr Glu Gly Leu Asn Arg		1055
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Val Leu Leu Val Arg Gly Gly Gly Arg Glu Val Ile Thr Ile Tyr Ser		1070
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&lt;210&gt; 4341

&lt;211&gt; 693

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4341

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&lt;210&gt; 4342

&lt;211&gt; 103

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4342

Met	Val	Arg	Leu	Leu	Lys	Arg	Lys	Val	Gln	His	Lys	Asp	Pro	Pro	Glu
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Arg	Gly	Gln	Ser	Ser	Arg	Gly	Trp	Asn	Ala	Ser	Leu	Gly	Leu	Gly	Glu
			20					25					30		
Lys	Glu	Gly	Leu	Val	Ser	Val	Gly	Ile	Thr	Gln	Lys	Arg	Ala	Leu	Tyr
			35				40					45			
Met	Phe	Ser	Tyr	Lys	Tyr	Ser	Val	Met	Glu	Lys	His	Ser	Leu	Asp	Ala
	50				55					60					
Tyr	Gly	Ser	Leu	Arg	Ser	Phe	Phe	Phe	His	Pro	Leu	Phe	Leu	Glu	Lys
65				70					75					80	
Lys	Phe	Phe	Lys	Ala	Tyr	Asn	Leu	Lys	Ser	Thr	Ser	Thr	Tyr	Ser	Arg
			85				90						95		
Asn	Ile	Val	Ala	Phe	Ser	Ile									
			100												

&lt;210&gt; 4343

&lt;211&gt; 499

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4343



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<210> 4344

<211> 118

<212> PRT

<213> Homo sapiens

<400> 4344

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Arg	Val	Val	Arg	Gly	Arg	Gly	Pro	Phe	Ala	Phe	Arg	Thr	Gly	Arg	Pro
			20				25						30		
Thr	Leu	Gly	Ala	Trp	Thr	Glu	Ser	Ser	Gly	Gly	Arg	Ala	Ala	Gly	Pro
		35				40						45			
Gly	Gly	Glu	Arg	Arg	Thr	Asp	Phe	Arg	Gly	Gly	Pro	Gly	His	Ala	Ala
	50				55						60				
Glu	Thr	Thr	Arg	Leu	Pro	Gly	Gly	Gly	Gln	Asp	Arg	Pro	Cys	Pro	Asp
65				70					75				80		
Lys	Met	Glu	Phe	Pro	Val	Trp	Leu	Gln	Leu	Ala	Ala	Arg	Ser	Gln	Ser
			85				90						95		
Ser	Ser	Val	Ile	Arg	Leu	Ser	Asp	Cys	Ser	Pro	Phe	Ile	Ser	Phe	Ala
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Val	Val	Gln	Ile	Leu	Ile										
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<210> 4345

<211> 349

<212> DNA

<213> Homo sapiens

<400> 4345

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 <211> 116  
 <212> PRT  
 <213> Homo sapiens

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 Thr Leu Thr His Met Ser Ile Thr Arg Leu His Glu Gln Lys Leu Val  
 35 40 45  
 Gln His Val Val Ser Gln Asn Cys Asp Gly Leu His Leu Arg Ser Gly  
 50 55 60  
 Leu Xaa Arg Thr Ala Ile Ser Glu Leu His Gly Asn Met Tyr Ile Glu  
 65 70 75 80  
 Gly Val Arg Ala Gly Val Arg Cys Asp Gly Ala His Cys Pro Pro Gln  
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 Thr Pro Asp Arg Pro Asp Leu Pro Gln Val Trp Asp Pro Ala Ala Gly  
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 His His Cys Ala  
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<210> 4347  
 <211> 353  
 <212> DNA  
 <213> Homo sapiens

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<210> 4348  
 <211> 72  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 4348

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Ala Ala Gly Pro Ala Ala Gln Ser Arg Pro Leu Arg Pro Ala Glu Ala
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Arg Gln Cys Arg Gly Arg Ser Arg Arg Arg Val Ala Arg Ser Ser Leu
 35           40           45
Pro Ser Pro Ser Ala Arg Pro Gly Arg Gly Gly Arg Pro Gly Pro Gly
 50           55           60
Gly Ser Ala Gly Cys Pro Gly Leu
65           70

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&lt;210&gt; 4349

&lt;211&gt; 2040

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4349

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120
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1741

&lt;210&gt; 4356

&lt;211&gt; 509

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4356

Met Ala Ala Ile Gly Val His Leu Gly Cys Thr Ser Ala Cys Val Ala

1	5	10	15
Val Tyr Lys Asp Gly Arg Ala Gly Val Val Ala Asn Asp Ala Gly Asp			
20	25	30	
Arg Val Thr Pro Ala Val Val Ala Tyr Ser Glu Asn Glu Glu Ile Val			
35	40	45	
Gly Leu Ala Ala Lys Gln Ser Arg Ile Arg Asn Ile Ser Asn Thr Val			
50	55	60	
Met Lys Val Lys Gln Ile Leu Gly Arg Ser Ser Ser Asp Pro Gln Ala			
65	70	75	80
Gln Lys Tyr Ile Ala Glu Ser Lys Cys Leu Val Ile Glu Lys Asn Gly			
85	90	95	
Lys Leu Arg Tyr Glu Ile Asp Thr Gly Glu Glu Thr Lys Phe Val Asn			
100	105	110	
Pro Glu Asp Val Ala Arg Leu Ile Phe Ser Lys Met Lys Glu Thr Ala			
115	120	125	
His Ser Val Leu Gly Ser Asp Ala Asn Asp Val Val Ile Thr Val Pro			
130	135	140	
Phe Asp Phe Gly Glu Lys Gln Lys Asn Ala Leu Gly Glu Ala Ala Arg			
145	150	155	160
Ala Ala Gly Phe Asn Val Leu Arg Leu Ile His Glu Pro Ser Ala Ala			
165	170	175	
Leu Leu Ala Tyr Gly Ile Gly Gln Asp Ser Pro Thr Gly Lys Ser Asn			
180	185	190	
Ile Leu Val Phe Lys Leu Gly Gly Thr Ser Leu Ser Leu Ser Val Met			
195	200	205	
Glu Val Asn Ser Gly Ile Tyr Arg Val Leu Ser Thr Asn Thr Asp Asp			
210	215	220	
Asn Ile Gly Gly Ala His Phe Thr Glu Thr Leu Ala Gln Tyr Leu Ala			
225	230	235	240
Ser Glu Phe Gln Arg Ser Phe Lys His Asp Val Arg Gly Asn Ala Arg			
245	250	255	
Ala Met Met Lys Leu Thr Asn Ser Ala Glu Val Ala Lys His Ser Leu			
260	265	270	
Ser Thr Leu Gly Ser Ala Asn Cys Phe Leu Asp Ser Leu Tyr Glu Gly			
275	280	285	
Gln Asp Phe Asp Cys Asn Val Ser Arg Ala Arg Phe Glu Leu Leu Cys			
290	295	300	
Ser Pro Leu Phe Asn Lys Cys Ile Glu Ala Ile Arg Gly Leu Leu Asp			
305	310	315	320
Gln Asn Gly Phe Thr Ala Asp Asp Ile Asn Lys Val Val Leu Cys Gly			
325	330	335	
Gly Ser Ser Arg Ile Pro Lys Leu Gln Gln Leu Ile Lys Asp Leu Phe			
340	345	350	
Pro Ala Val Glu Leu Leu Asn Ser Ile Pro Pro Asp Glu Val Ile Pro			
355	360	365	
Ile Gly Ala Ala Ile Glu Ala Gly Ile Leu Ile Gly Lys Glu Asn Leu			
370	375	380	
Leu Val Glu Asp Ser Leu Met Ile Glu Cys Ser Ala Arg Asp Ile Leu			
385	390	395	400
Val Lys Gly Val Asp Glu Ser Gly Ala Ser Arg Phe Thr Val Leu Phe			
405	410	415	
Pro Ser Gly Thr Pro Leu Pro Ala Arg Arg Gln His Thr Leu Gln Ala			
420	425	430	
Pro Gly Ser Ile Ser Ser Val Cys Leu Glu Leu Tyr Glu Ser Asp Gly			

435                      440                      445  
 Lys Asn Ser Ala Lys Glu Glu Thr Lys Phe Ala Gln Val Val Leu Gln  
 450                      455                      460  
 Asp Leu Asp Lys Lys Glu Asn Gly Leu Arg Asp Ile Leu Ala Val Leu  
 465                      470                      475                      480  
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<210> 4357  
 <211> 421  
 <212> DNA  
 <213> Homo sapiens

<400> 4357  
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<210> 4358  
 <211> 115  
 <212> PRT  
 <213> Homo sapiens

<400> 4358  
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 20                      25                      30  
 Gln Lys Pro Trp Pro Ser Pro Ala Val Phe Phe Arg Arg Asn Val Arg  
 35                      40                      45  
 Gly Leu Pro Pro Arg Phe Ser Ser Pro Thr Pro Leu Trp Arg Lys Val  
 50                      55                      60  
 Leu Ser Thr Ala Val Val Gly Ala Pro Leu Leu Leu Gly Ala Arg Tyr  
 65                      70                      75                      80  
 Val Met Ala Glu Ala Arg Glu Lys Arg Arg Met Arg Leu Val Val Asp  
 85                      90                      95  
 Gly Met Gly Arg Phe Cys Arg Ser Leu Lys Val Gly Leu Gln Ile Ser  
 100                      105                      110  
 Leu Asp Tyr

115

&lt;210&gt; 4359

&lt;211&gt; 3661

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4359

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180  
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1380

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<210> 4360

<211> 670

<212> PRT

<213> Homo sapiens

<400> 4360

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Thr	Phe	Gly	Pro	Ala	Phe	Ser	Ala	Val	Thr	Thr	Ile	Thr	Lys	Ala	Asp
		35					40						45		
Gly	Thr	Ser	Thr	Tyr	Lys	Gln	His	Cys	Arg	Thr	Pro	Ser	Ser	Ser	Ser
		50				55					60				
Thr	Leu	Ala	Tyr	Ser	Pro	Arg	Asp	Glu	Glu	Asp	Ser	Met	Pro	Pro	Ile
65					70					75				80	
Ser	Thr	Pro	Arg	Arg	Ser	Asp	Ser	Ala	Ile	Ser	Val	Arg	Ser	Leu	His
				85					90					95	
Ser	Glu	Ser	Ser	Met	Ser	Leu	Arg	Ser	Thr	Phe	Ser	Leu	Pro	Glu	Glu
			100					105					110		
Glu	Glu	Glu	Pro	Glu	Pro	Leu	Val	Phe	Ala	Glu	Gln	Pro	Ser	Val	Lys
			115				120					125			
Leu	Cys	Cys	Gln	Leu	Cys	Cys	Ser	Val	Phe	Lys	Asp	Pro	Val	Ile	Thr
		130				135					140				
Thr	Cys	Gly	His	Thr	Phe	Cys	Arg	Arg	Cys	Ala	Leu	Lys	Ser	Glu	Lys
145					150					155				160	
Cys	Pro	Val	Asp	Asn	Val	Lys	Leu	Thr	Val	Val	Val	Asn	Asn	Ile	Ala
				165					170					175	
Val	Ala	Glu	Gln	Ile	Gly	Glu	Leu	Phe	Ile	His	Cys	Arg	His	Gly	Cys

			180					185					190				
Arg	Val	Ala	Gly	Ser	Gly	Lys	Pro	Pro	Ile	Phe	Glu	Val	Asp	Pro	Arg		
		195					200					205					
Gly	Cys	Pro	Phe	Thr	Ile	Lys	Leu	Ser	Ala	Arg	Lys	Asp	His	Glu	Gly		
	210					215					220						
Ser	Cys	Asp	Tyr	Arg	Pro	Val	Arg	Cys	Pro	Asn	Asn	Pro	Ser	Cys	Pro		
225					230					235					240		
Pro	Leu	Leu	Arg	Met	Asn	Leu	Glu	Ala	His	Leu	Lys	Glu	Cys	Glu	His		
				245					250					255			
Ile	Lys	Cys	Pro	His	Ser	Lys	Tyr	Gly	Cys	Thr	Phe	Ile	Gly	Asn	Gln		
			260					265				270					
Asp	Thr	Tyr	Glu	Thr	His	Leu	Glu	Thr	Cys	Arg	Phe	Glu	Gly	Leu	Lys		
		275					280					285					
Glu	Phe	Leu	Gln	Gln	Thr	Asp	Asp	Arg	Phe	His	Glu	Met	His	Val	Ala		
	290					295					300						
Leu	Ala	Gln	Lys	Asp	Gln	Glu	Ile	Ala	Phe	Leu	Arg	Ser	Met	Leu	Gly		
305					310				315						320		
Lys	Leu	Ser	Glu	Lys	Ile	Asp	Gln	Leu	Glu	Lys	Ser	Leu	Glu	Leu	Lys		
				325					330					335			
Phe	Asp	Val	Leu	Asp	Glu	Asn	Gln	Ser	Lys	Leu	Ser	Glu	Asp	Leu	Met		
			340					345					350				
Glu	Phe	Arg	Arg	Asp	Ala	Ser	Met	Leu	Asn	Asp	Glu	Leu	Ser	His	Ile		
		355					360					365					
Asn	Ala	Arg	Leu	Asn	Met	Gly	Ile	Leu	Gly	Ser	Tyr	Asp	Pro	Gln	Gln		
	370					375					380						
Ile	Phe	Lys	Cys	Lys	Gly	Thr	Phe	Val	Gly	His	Gln	Gly	Pro	Val	Trp		
385					390				395						400		
Cys	Leu	Cys	Val	Tyr	Ser	Met	Gly	Asp	Leu	Leu	Phe	Ser	Gly	Ser	Ser		
				405				410						415			
Asp	Lys	Thr	Ile	Lys	Val	Trp	Asp	Thr	Cys	Thr	Thr	Tyr	Lys	Cys	Gln		
			420					425					430				
Lys	Thr	Leu	Glu	Gly	His	Asp	Gly	Ile	Val	Leu	Ala	Leu	Cys	Ile	Gln		
		435					440					445					
Gly	Cys	Lys	Leu	Tyr	Ser	Gly	Ser	Ala	Asp	Cys	Thr	Ile	Ile	Val	Trp		
	450					455					460						
Asp	Ile	Gln	Asn	Leu	Gln	Lys	Val	Asn	Thr	Ile	Arg	Ala	His	Asp	Asn		
465					470					475				480			
Pro	Val	Cys	Thr	Leu	Val	Ser	Ser	His	Asn	Val	Leu	Phe	Ser	Gly	Ser		
				485					490					495			
Leu	Lys	Ala	Ile	Lys	Val	Trp	Asp	Ile	Val	Gly	Thr	Glu	Leu	Lys	Leu		
			500					505					510				
Lys	Lys	Glu	Leu	Thr	Gly	Leu	Asn	His	Trp	Val	Arg	Ala	Leu	Val	Ala		
		515					520					525					
Ala	Gln	Ser	Tyr	Leu	Tyr	Ser	Gly	Ser	Tyr	Gln	Thr	Ile	Lys	Ile	Trp		
	530					535											

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Phe Ser Gly Ala Val Asp Ser Thr Val Lys Val Trp Thr Cys		655
660	665	670

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 <211> 574  
 <212> DNA  
 <213> Homo sapiens

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<210> 4362  
 <211> 116  
 <212> PRT  
 <213> Homo sapiens

<400> 4362  
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 Asp Met Gln Gln His Glu Cys Ala Met Ser Trp Arg Ala His Tyr Gly  
 35 40 45  
 Glu Val Tyr Ser Val Glu Phe Ser Tyr Asp Glu Asn Thr Val Tyr Ser  
 50 55 60  
 Ile Gly Glu Asp Gly Lys Val Gly Gly Ser Arg Ile Gln Ile Arg Glu  
 65 70 75 80  
 His Arg Asp Asp Met Trp Ala Gly Cys Arg Leu Trp Pro Tyr Leu Leu  
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 Leu Ala Leu Gln Pro Gly Ala Ser Phe Cys Ser Phe Val Ile Cys Arg

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Ile Gly Ile Asn  
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105

110

<210> 4363  
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<212> DNA  
<213> Homo sapiens

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1222

&lt;210&gt; 4364

<211> 75  
 <212> PRT  
 <213> Homo sapiens

<400> 4364  
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 Asn His Ser Ser Thr Arg Ala Gln Arg Pro Gly Pro Gly Gly Arg Ser  
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<210> 4365  
 <211> 469  
 <212> DNA  
 <213> Homo sapiens

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 cgggtgggtcg accaggtggt ggtggagaac ggtgtgcgtc cggatgagga aatctactac  
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<210> 4366  
 <211> 156  
 <212> PRT  
 <213> Homo sapiens

<400> 4366  
 Asp Val Leu Asp Gly Lys Val Ala Pro Gly Lys Asn Val Pro Val Tyr  
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 Asp Thr Ile Cys Glu Phe Thr Gly Met Ser Val Ala Asp Phe Leu Ala  
 20 25 30  
 Asp Lys Gly Ser Gln Val Glu Ile Val Thr Asp Asp Ile Lys Pro Gly  
 35 40 45  
 Val Ala Ile Gly Gly Thr Ser Phe Pro Thr Tyr Tyr Arg Ser Met Tyr  
 50 55 60  
 Pro Lys Glu Val Ile Met Thr Gly Asp Met Met Leu Glu Lys Val Tyr

```

65          70          75          80
Arg Glu Gly Asp Lys Leu Val Ala Val Leu Glu Asn Glu Tyr Thr Gly
          85          90          95
Ala Lys Glu Glu Arg Val Val Asp Gln Val Val Val Glu Asn Gly Val
          100          105          110
Arg Pro Asp Glu Glu Ile Tyr Tyr Gly Leu Lys Glu Gly Ser Arg Asn
          115          120          125
Lys Gly Gln Ile Asp Val Glu Ala Leu Phe Ala Ile Lys Pro Gln Pro
          130          135          140
Ser Leu Asn Thr Leu Asn Glu Glu Ala Ala Gly Asp
145          150          155

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<210> 4367

<211> 852

<212> DNA

<213> Homo sapiens

<400> 4367

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660
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720
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aactaaaaaa aa
852

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<210> 4368

<211> 102

<212> PRT

<213> Homo sapiens

<400> 4368  
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 Leu Gly Pro Ala Gly Leu Leu Gln Val Glu Phe Pro Glu Ala Arg Ile  
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 Phe Glu Glu Thr Leu Asn Ile Leu Ile Tyr Glu Thr Pro Arg Gly Pro  
 35 40 45  
 Asp Pro Ala Leu Leu Glu Ala Thr Gly Gly Ala Ala Gly Ala Gly Gly  
 50 55 60  
 Ala Gly Arg Gly Glu Asp Glu Glu Asn Arg Glu His Arg Val Arg Arg  
 65 70 75 80  
 Ile His Val Arg Arg His Ile Thr His Asp Glu Arg Pro His Gly Gln  
 85 90 95  
 Gln Ile Val Phe Lys Asp  
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<210> 4369  
 <211> 1264  
 <212> DNA  
 <213> Homo sapiens

<400> 4369  
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 240  
 aatggaacta atgccaaagc gtttgagtta agctacctcg agaaggttcc agaagtcaaa  
 300  
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 420  
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 480  
 cacctcaagg caattgcaaa acatgaaatg aaaccagttt taaaacaacg gatgtcagag  
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 720  
 gaaagggttt tgcagcagaa acagaaacgg gccaaaccaca gagagagaaa taagaccaga  
 780  
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 840  
 ccgcagggtc tgagctatgc ggaggacgag gctgagcacg agaacatgaa ggctgtgctg  
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 aaaacctcgt cccctccag gagtcccctg cacatacctt ctccatcgtg tcagctgtgt  
 960

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 1264

<210> 4370  
 <211> 322  
 <212> PRT  
 <213> Homo sapiens

<400> 4370  
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 Trp Ala Phe Lys Met Asp Tyr Glu Thr Thr Glu Lys Glu Val Ala Glu  
 35 40 45  
 Pro Leu Leu Asp Leu Lys Glu Gly Ile Asp Gln Leu Glu Asn Asn Lys  
 50 55 60  
 Thr Leu Gly Phe Ile Leu Ser Thr Leu Leu Ala Ile Gly Asn Phe Leu  
 65 70 75 80  
 Asn Gly Thr Asn Ala Lys Ala Phe Glu Leu Ser Tyr Leu Glu Lys Val  
 85 90 95  
 Pro Glu Val Lys Asp Thr Val His Lys Gln Ser Leu Leu His His Val  
 100 105 110  
 Cys Thr Met Val Val Glu Asn Phe Pro Asp Ser Ser Asp Leu Tyr Ser  
 115 120 125  
 Glu Ile Gly Ala Ile Thr Arg Ser Ala Lys Val Asp Phe Asp Gln Leu  
 130 135 140  
 Gln Asp Asn Leu Cys Gln Met Glu Arg Arg Cys Lys Ala Ser Trp Asp  
 145 150 155 160  
 His Leu Lys Ala Ile Ala Lys His Glu Met Lys Pro Val Leu Lys Gln  
 165 170 175  
 Arg Met Ser Glu Phe Leu Lys Asp Cys Ala Glu Arg Ile Ile Ile Leu  
 180 185 190  
 Lys Ile Val His Arg Arg Ile Ile Asn Arg Phe His Ser Phe Leu Leu  
 195 200 205  
 Phe Met Gly His Pro Pro Tyr Ala Ile Arg Glu Val Asn Ile Asn Lys  
 210 215 220  
 Phe Cys Arg Ile Ile Ser Glu Phe Ala Leu Glu Tyr Arg Thr Thr Arg  
 225 230 235 240  
 Glu Arg Val Leu Gln Gln Lys Gln Lys Arg Ala Asn His Arg Glu Arg  
 245 250 255  
 Asn Lys Thr Arg Gly Lys Met Ile Thr Asp Ser Gly Lys Phe Ser Gly  
 260 265 270  
 Ser Ser Pro Ala Pro Pro Ser Gln Pro Gln Gly Leu Ser Tyr Ala Glu



	275		280		285										
Asp	Ala	Ala	Glu	His	Glu	Asn	Met	Lys	Ala	Val	Leu	Lys	Thr	Ser	Ser
	290				295						300				
Pro	Ser	Arg	Ser	Pro	Leu	His	Ile	Pro	Ser	Pro	Ser	Cys	Gln	Leu	Cys
305				310						315					320
Phe	Ser														

<210> 4371  
 <211> 907  
 <212> DNA  
 <213> Homo sapiens

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 120  
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 180  
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 240  
 ccctatgaga ttccagttca agaagagatc actgctcgac tgcacttcat taagtttgag  
 300  
 aatacctaca tcgaagcctg cctggacttc atcaaagacc atctcgtcaa cacagagacc  
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 420  
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 480  
 gtgtcaaga acatccccca tgaggccttc gtgtaccaga aggattccga ccctgagttc  
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 780  
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 atgatca  
 907

<210> 4372  
 <211> 302  
 <212> PRT  
 <213> Homo sapiens

<400> 4372  
 Thr Phe Lys Met Ala Glu Cys Gly Ala Ser Gly Ser Gly Ser Ser Gly

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Asp Ser Leu Asp Lys Ser Ile Thr Leu Pro Pro Asp Glu Ile Phe Arg
      20           25           30
Asn Leu Glu Asn Ala Lys Arg Phe Ala Ile Asp Ile Gly Gly Ser Leu
      35           40           45
Thr Lys Leu Ala Tyr Tyr Ser Thr Val Gln His Lys Val Ala Lys Val
      50           55           60
Arg Ser Phe Asp His Ser Gly Lys Asp Thr Glu Arg Glu His Glu Pro
      65           70           75           80
Pro Tyr Glu Ile Ser Val Gln Glu Glu Ile Thr Ala Arg Leu His Phe
      85           90           95
Ile Lys Phe Glu Asn Thr Tyr Ile Glu Ala Cys Leu Asp Phe Ile Lys
      100          105          110
Asp His Leu Val Asn Thr Glu Thr Lys Val Ile Gln Ala Thr Gly Gly
      115          120          125
Gly Ala Tyr Lys Phe Lys Asp Leu Ile Glu Glu Lys Leu Arg Leu Lys
      130          135          140
Val Asp Lys Glu Asp Val Met Thr Cys Leu Ile Lys Gly Cys Asn Phe
      145          150          155          160
Val Leu Lys Asn Ile Pro His Glu Ala Phe Val Tyr Gln Lys Asp Ser
      165          170          175
Asp Pro Glu Phe Arg Phe Gln Thr Asn His Pro His Ile Phe Pro Tyr
      180          185          190
Leu Leu Val Asn Ile Gly Ser Gly Val Ser Ile Val Lys Val Glu Thr
      195          200          205
Glu Asp Arg Phe Glu Trp Val Gly Gly Ser Ser Ile Gly Gly Gly Thr
      210          215          220
Phe Trp Gly Leu Gly Ala Leu Leu Thr Lys Thr Lys Lys Phe Asp Glu
      225          230          235          240
Leu Leu His Leu Ala Ser Arg Gly Gln His Ser Asn Val Asp Met Leu
      245          250          255
Val Arg Asp Val Tyr Gly Gly Ala His Gln Thr Leu Gly Leu Ser Gly
      260          265          270
Asn Leu Ile Ala Ser Ser Phe Gly Lys Ser Ala Thr Ala Asp Gln Glu
      275          280          285
Phe Ser Lys Glu Asp Met Ala Lys Ser Leu Leu His Met Ile
      290          295          300

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&lt;210&gt; 4373

&lt;211&gt; 1017

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4373

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120
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240
tgtgcattgt tgggtgggatt ctgctcgtgt tccaaatcat cgcctttctg gtgggaggct
300

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tgattgctcc agggcccaca acggcagtgt cctacatgtc ggtgaaatgt gtggatgccc  
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 420  
 tccgagacat tgaagaggca attccaaggg aaattgaagc caatgacatc gtgttttctg  
 480  
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 660  
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 1017

&lt;210&gt; 4374

&lt;211&gt; 272

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4374

Met	Ala	Gly	Ala	Ile	Ile	Glu	Asn	Met	Ser	Thr	Lys	Lys	Leu	Cys	Ile
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Val	Gly	Gly	Ile	Leu	Leu	Val	Phe	Gln	Ile	Ile	Ala	Phe	Leu	Val	Gly
			20					25					30		
Gly	Leu	Ile	Ala	Pro	Gly	Pro	Thr	Thr	Ala	Val	Ser	Tyr	Met	Ser	Val
		35					40					45			
Lys	Cys	Val	Asp	Ala	Arg	Lys	Asn	His	His	Lys	Thr	Lys	Trp	Phe	Val
	50					55					60				
Pro	Trp	Gly	Pro	Asn	His	Cys	Asp	Lys	Ile	Arg	Asp	Ile	Glu	Glu	Ala
65					70				75					80	
Ile	Pro	Arg	Glu	Ile	Glu	Ala	Asn	Asp	Ile	Val	Phe	Ser	Val	His	Ile
			85						90					95	
Pro	Leu	Pro	His	Met	Glu	Met	Ser	Pro	Trp	Phe	Gln	Phe	Met	Leu	Phe
			100					105					110		
Ile	Leu	Gln	Leu	Asp	Ile	Ala	Phe	Lys	Leu	Asn	Asn	Gln	Ile	Arg	Glu
		115					120					125			
Asn	Ala	Glu	Val	Ser	Met	Asp	Val	Ser	Leu	Ala	Tyr	Arg	Asp	Asp	Ala
		130				135					140				
Phe	Ala	Glu	Trp	Thr	Glu	Met	Ala	His	Glu	Arg	Val	Pro	Arg	Lys	Leu
145					150				155					160	
Lys	Cys	Thr	Phe	Thr	Ser	Pro	Lys	Thr	Pro	Glu	His	Glu	Gly	Arg	Tyr
			165					170					175		
Tyr	Glu	Cys	Asp	Val	Leu	Pro	Phe	Met	Glu	Ile	Gly	Ser	Val	Ala	His

	180		185		190										
Lys	Phe	Tyr	Leu	Leu	Asn	Ile	Arg	Leu	Pro	Val	Asn	Glu	Lys	Lys	Lys
	195		200		205										
Ile	Asn	Val	Gly	Ile	Gly	Glu	Ile	Lys	Asp	Ile	Arg	Leu	Val	Gly	Ile
	210		215		220										
His	Gln	Asn	Gly	Gly	Phe	Thr	Lys	Val	Trp	Phe	Ala	Met	Lys	Thr	Phe
225			230		235				240						
Leu	Thr	Pro	Ser	Ile	Phe	Ile	Ile	Met	Val	Trp	Tyr	Trp	Arg	Arg	Ile
			245		250				255						
Thr	Met	Met	Ser	Arg	Pro	Pro	Val	Leu	Leu	Glu	Lys	Val	Ile	Phe	Ala
			260		265				270						

&lt;210&gt; 4375

&lt;211&gt; 1966

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4375

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1080

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 1920  
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 1966

&lt;210&gt; 4376

&lt;211&gt; 399

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4376

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 Asp Phe Leu Met Phe Leu Ser Thr Leu Ser Arg Tyr Ser Ser Ser Ser  
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 Val Pro His Ser Ser Ser Thr Phe Arg Leu Thr Ala Ser Phe Gly Arg  
 35 40 45  
 Ala Gly Pro Gly Met Leu His Thr Thr Gln Leu Tyr Gln His Val Pro  
 50 55 60  
 Glu Thr Arg Trp Pro Ile Val Tyr Ser Pro Arg Tyr Asn Ile Thr Phe  
 65 70 75 80  
 Met Gly Leu Glu Lys Leu His Pro Phe Asp Ala Gly Lys Trp Gly Lys  
 85 90 95  
 Val Ile Asn Phe Leu Lys Glu Glu Lys Leu Leu Ser Asp Ser Met Leu  
 100 105 110  
 Val Glu Ala Arg Glu Ala Ser Glu Glu Asp Leu Leu Val Val His Thr  
 115 120 125  
 Arg Arg Tyr Leu Asn Glu Leu Lys Trp Ser Phe Ala Val Ala Thr Ile

130		135		140	
Thr	Glu	Ile	Pro	Pro	Val
145		150		155	
Lys	Val	Leu	Arg	Pro	Leu
		165		170	
Gly	Lys	Leu	Ala	Val	Glu
		180		185	
Phe	His	His	Cys	Ser	Ser
195		200		205	
Asp	Ile	Thr	Leu	Ala	Ile
210		215		220	
Ser	Arg	Ala	Thr	Ile	Ile
225		230		235	
Glu	Arg	Asp	Phe	Met	Asp
		245		250	
Asn	Arg	His	Ile	Tyr	Pro
		260		265	
Arg	Lys	Val	Glu	Leu	Glu
275		280		285	
Lys	Val	Glu	Arg	Asn	Ile
290		295		300	
Val	Val	Val	Tyr	Asn	Ala
305		310		315	
Gly	Gly	Leu	Ser	Ile	Ser
		325		330	
Val	Phe	Arg	Met	Val	Arg
		340		345	
Ser	Gly	Gly	Tyr	Gln	Lys
355		360		365	
Leu	Asn	Leu	Phe	Gly	Leu
370		375		380	
Ser	Ala	Gln	Asn	Ser	Asp
385		390		395	

&lt;210&gt; 4377

&lt;211&gt; 812

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4377

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&lt;210&gt; 4378

&lt;211&gt; 233

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4378

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			20					25					30		
Ser	Met	Arg	Glu	His	Pro	Ala	Leu	Arg	Ser	Leu	Arg	Leu	Leu	Thr	Leu
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Leu	Ala	Asn	Leu	Ala	Arg	Leu	Ile	Gln	Ala	Lys	Lys	Ala	Leu	Asp	Leu
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Gly	Thr	Phe	Thr	Gly	Tyr	Ser	Ala	Leu	Ala	Leu	Ala	Leu	Ala	Leu	Pro
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			100					105					110		
Leu	Gly	Arg	Pro	Leu	Trp	Arg	Gln	Ala	Glu	Ala	Glu	His	Lys	Ile	Arg
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Asn	Cys	Ser	Ala	Tyr	Tyr	Glu	Arg	Cys	Leu	Gln	Leu	Leu	Arg	Pro	Gly
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Pro	Pro	Lys	Gly	Asp	Val	Ala	Ala	Glu	Cys	Val	Arg	Asn	Leu	Asn	Glu
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Arg	Ile	Arg	Arg	Asp	Val	Arg	Val	Tyr	Ile	Ser	Leu	Leu	Pro	Leu	Gly
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&lt;210&gt; 4379

&lt;211&gt; 2347

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4379

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&lt;210&gt; 4380

&lt;211&gt; 652

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4380

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		20						25					30		
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Gln	Glu	Ser	Asp	Leu	Arg	Leu	Phe	Leu	Asp	Gly	Asp	Ile	Leu	Arg	Gln
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Asp	Arg	Val	Ser	Lys	Gly	Cys	Tyr	Ser	Phe	Ile	His	Leu	Ser	Phe	Gln
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Gln	Phe	Leu	Thr	Ala	Leu	Phe	Tyr	Thr	Leu	Glu	Lys	Glu	Glu	Glu	Glu
		100						105					110		
Asp	Arg	Asp	Gly	His	Thr	Trp	Asp	Ile	Gly	Asp	Val	Gln	Lys	Leu	Leu
		115				120					125				
Ser	Gly	Val	Glu	Arg	Leu	Arg	Asn	Pro	Asp	Leu	Ile	Gln	Ala	Gly	Tyr

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Thr	Phe	Gly	Cys	Arg	Met	Ser	Pro	Asp	Ile	Lys	Gln	Glu	Leu	Leu	Arg
				165					170						175
Cys	Asp	Ile	Ser	Cys	Lys	Gly	Gly	His	Ser	Thr	Val	Thr	Asp	Leu	Gln
			180					185					190		
Glu	Leu	Leu	Gly	Cys	Leu	Tyr	Glu	Ser	Gln	Glu	Glu	Glu	Leu	Val	Lys
	195						200					205			
Glu	Val	Met	Ala	Gln	Phe	Lys	Glu	Ile	Ser	Leu	His	Leu	Asn	Ala	Val
	210					215					220				
Asp	Val	Val	Pro	Ser	Ser	Phe	Cys	Val	Lys	His	Cys	Arg	Asn	Leu	Gln
225					230				235						240
Lys	Met	Ser	Leu	Gln	Val	Ile	Lys	Glu	Asn	Leu	Pro	Glu	Asn	Val	Thr
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Ala	Ser	Glu	Ser	Asp	Ala	Glu	Val	Glu	Arg	Ser	Gln	Asp	Asp	Gln	His
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	275						280					285			
Asp	Leu	Met	Gly	Leu	Ala	Ile	Asn	Asp	Ser	Phe	Leu	Ser	Ala	Ser	Leu
	290					295					300				
Val	Arg	Ile	Leu	Cys	Glu	Gln	Ile	Ala	Ser	Asp	Thr	Cys	His	Leu	Gln
305					310					315					320
Arg	Val	Val	Phe	Lys	Asn	Ile	Ser	Pro	Ala	Asp	Ala	His	Arg	Asn	Leu
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Xaa	Pro	Xaa	Ala	Leu	Arg	Gly	His	Lys	Thr	Val	Thr	Tyr	Leu	Thr	Leu
			340					345					350		
Gln	Gly	Asn	Asp	Gln	Asp	Asp	Met	Phe	Pro	Ala	Leu	Cys	Glu	Val	Leu
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Arg	His	Pro	Glu	Cys	Asn	Leu	Arg	Tyr	Leu	Gly	Leu	Val	Ser	Cys	Ser
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Ala	Thr	Thr	Gln	Gln	Trp	Ala	Asp	Leu	Ser	Leu	Ala	Leu	Glu	Val	Asn
385					390					395					400
Gln	Ser	Leu	Thr	Cys	Val	Asn	Leu	Ser	Asp	Asn	Glu	Leu	Leu	Asp	Glu
			405						410						415
Gly	Ala	Lys	Leu	Leu	Tyr	Thr	Thr	Leu	Arg	His	Pro	Lys	Cys	Phe	Leu
			420					425					430		
Gln	Arg	Leu	Ser	Leu	Glu	Asn	Cys	His	Leu	Thr	Glu	Ala	Asn	Cys	Lys
	435					440					445				
Asp	Leu	Ala	Ala	Val	Leu	Val	Val	Ser	Arg	Glu	Leu	Thr	His	Leu	Cys
	450					455					460				
Leu	Ala	Lys	Asn	Pro	Ile	Gly	Asn	Thr	Gly	Val	Lys	Phe	Leu	Cys	Glu
465					470				475						480
Gly	Leu	Arg	Tyr	Pro	Glu	Cys	Lys	Leu	Gln	Thr	Leu	Val	Leu	Trp	Asn
				485					490						495
Cys	Asp	Ile	Thr	Ser	Asp	Gly	Cys	Cys	Asp	Leu	Thr	Lys	Leu	Leu	Gln
		500						505					510		
Glu	Lys	Ser	Ser	Leu	Leu	Cys	Leu	Asp	Leu	Gly	Leu	Asn	His	Ile	Gly
	515						520					525			
Val	Lys	Gly	Met	Lys	Phe	Leu	Cys	Glu	Ala	Leu	Arg	Lys	Pro	Leu	Cys
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Asn	Leu	Arg	Cys	Leu	Trp	Leu	Trp	Gly	Cys	Ser	Ile	Pro	Pro	Phe	Ser
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<210> 4381
<211> 1638
<212> DNA
<213> Homo sapiens
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 1200  
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<210> 4382

<211> 325

<212> PRT

<213> Homo sapiens

<400> 4382

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			20					25					30		
Gln	Arg	Ile	Ala	Glu	Glu	Thr	Ile	Leu	Lys	Ser	Gln	Val	Asp	Lys	Arg
		35					40					45			
Phe	Ser	Ala	His	Tyr	Asp	Ala	Val	Glu	Ala	Glu	Leu	Lys	Ser	Ser	Ala
		50				55					60				
Val	Gly	Leu	Val	Thr	Leu	Asn	Asp	Met	Lys	Ala	Arg	Gln	Glu	Ala	Leu
65					70					75				80	
Val	Arg	Glu	Arg	Glu	Arg	Gln	Leu	Ala	Lys	Arg	Gln	His	Leu	Glu	Glu
				85					90					95	
Gln	Arg	Leu	Gln	Gln	Glu	Arg	Gln	Arg	Glu	Gln	Glu	Gln	Arg	Arg	Glu
			100					105					110		
Arg	Lys	Arg	Lys	Ile	Ser	Cys	Leu	Ser	Phe	Ala	Leu	Asp	Asp	Leu	Asp
		115					120					125			
Asp	Gln	Ala	Asp	Ala	Ala	Glu	Ala	Arg	Arg	Ala	Gly	Asn	Leu	Gly	Lys
		130				135					140				
Asn	Pro	Asp	Val	Asp	Thr	Ser	Phe	Leu	Pro	Asp	Arg	Asp	Arg	Glu	Glu
145					150					155				160	
Glu	Glu	Asn	Arg	Leu	Arg	Glu	Glu	Leu	Arg	Gln	Glu	Trp	Glu	Ala	Gln
				165					170					175	
Arg	Glu	Lys	Val	Lys	Asp	Glu	Glu	Met	Glu	Val	Thr	Phe	Ser	Tyr	Trp
			180					185					190		
Asp	Gly	Ser	Gly	His	Arg	Arg	Thr	Val	Arg	Val	Arg	Lys	Gly	Asn	Thr
		195					200					205			
Val	Gln	Gln	Phe	Leu	Lys	Lys	Ala	Leu	Gln	Gly	Leu	Arg	Lys	Asp	Phe

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      210      215      220
Leu Glu Leu Arg Ser Ala Gly Val Glu Gln Leu Met Phe Ile Lys Glu
225      230      235      240
Asp Leu Ile Leu Pro His Tyr His Thr Phe Tyr Asp Phe Ile Ile Ala
      245      250      255
Arg Ala Arg Gly Lys Ser Gly Pro Leu Phe Ser Phe Asp Val His Asp
      260      265      270
Asp Val Arg Leu Leu Ser Asp Ala Thr Met Glu Lys Asp Glu Ser His
      275      280      285
Ala Gly Lys Val Val Leu Arg Ser Trp Tyr Glu Lys Asn Lys His Ile
      290      295      300
Phe Pro Ala Ser Arg Trp Glu Ala Tyr Asp Pro Glu Lys Lys Trp Asp
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<210> 4383  
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 <212> DNA  
 <213> Homo sapiens

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<210> 4384  
 <211> 139  
 <212> PRT  
 <213> Homo sapiens

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Val Leu Lys His Pro Gln Ile Gln Lys Glu Ser Gln Tyr Ile Lys Tyr
      35      40      45
Leu Cys Cys Asp Asp Thr Arg Thr Leu Asn Gln Trp Val Met Gly Ile
      50      55      60
Arg Ile Ala Lys Tyr Gly Lys Thr Leu Tyr Asp Asn Tyr Gln Arg Ala
      65      70      75      80
Val Ala Lys Ala Gly Leu Ala Ser Arg Trp Thr Asn Leu Gly Thr Val

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Val Ser Leu Gln Ser Pro Asp Arg Arg Leu Ser His Asp Pro Ala Ala  
35 40 45  
Ser Ser Trp Ser Gly Phe Cys Gly Ile Ser Pro Ala Phe Ser Ala Phe

50                      55                      60  
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<210> 4387  
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 <212> DNA  
 <213> Homo sapiens

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 120  
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 180  
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 cctttttttg gggggggggg tttttttttt tttttttttt tttttttttt ttttttttac  
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<210> 4388  
 <211> 113  
 <212> PRT  
 <213> Homo sapiens

<400> 4388  
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                     20                      25                      30  
 Ser His Pro Lys Lys Pro Pro Pro Pro Gly Xaa Gly Gly Arg Gly  
                     35                      40                      45  
 Gly Gly Phe Phe Pro Pro Pro Pro Pro Pro Lys Lys Lys Thr Arg Lys  
                     50                      55                      60  
 Ile Phe Phe Pro Pro Pro Pro Lys Lys Lys Lys Lys Pro Gly Gly Pro  
 65                      70                      75                      80  
 Pro Phe Phe Gly Gly Gly Gly Phe Phe Phe Phe Phe Phe Phe Phe  
                     85                      90                      95  
 Phe Phe Phe Tyr Lys Thr Glu Asn Val Tyr Cys Ala Arg Gly Trp Ser  
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 Val

<210> 4389  
 <211> 1895  
 <212> DNA  
 <213> Homo sapiens

<400> 4389

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360  
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<210> 4390

<211> 335

<212> PRT

<213> Homo sapiens

<400> 4390

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		20						25					30		
Ser	Ala	Arg	Glu	Lys	Ala	Leu	Arg	Gly	Ala	Leu	Arg	Ala	Ser	Val	Glu
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Ile	Lys	Gly	Phe	Arg	Tyr	Glu	Leu	Tyr	Cys	Leu	Ala	Arg	Ala	Ala	Arg
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Thr	Pro	Leu	Cys	Leu	Val	Tyr	Cys	Val	Arg	Pro	Gly	Gly	Pro	Ile	Ala
			85						90					95	
Gly	Pro	Gln	Val	Ala	Gly	Ala	Asn	Glu	Asn	Pro	Gly	Arg	Asn	Val	Ser
			100					105					110		
Val	Ser	Trp	Arg	Pro	Arg	Ala	Glu	Glu	Asp	Gly	Arg	Ala	Gln	Ala	Ala
			115				120					125			
Gly	Ser	Ser	Val	Leu	Arg	Glu	Leu	His	Thr	Ala	Asp	Ser	Val	Val	Asn
		130				135					140				
Gly	Ser	Ala	Gln	Ala	Asp	Val	Pro	Lys	Glu	Leu	Glu	Arg	Glu	Glu	Ser
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Gly	Ala	Ala	Glu	Ser	Pro	Ala	Leu	Val	Thr	Pro	Asp	Ser	Glu	Lys	Ser
				165					170					175	
Ala	Lys	His	Gly	Ser	Gly	Ala	Phe	Tyr	Ser	Pro	Glu	Leu	Leu	Glu	Ala
			180					185					190		
Leu	Thr	Leu	Arg	Phe	Glu	Ala	Pro	Asp	Ser	Arg	Asn	Arg	Trp	Asp	Arg
		195					200					205			
Pro	Leu	Phe	Thr	Leu	Val	Gly	Ile	Glu	Glu	Pro	Leu	Pro	Pro	Ala	Gly
		210				215					220				
Ile	Arg	Ser	Ala	Leu	Phe	Glu	Asn	Arg	Ala	Pro	Pro	Pro	His	Gln	Ser
225					230				235					240	
Thr	Gln	Ser	Gln	Pro	Leu	Ala	Ser	Gly	Ser	Phe	Leu	His	Gln	Leu	Asp
				245					250					255	
Gln	Val	Thr	Ser	Gln	Val	Leu	Ala	Gly	Leu	Met	Glu	Ala	Gln	Lys	Ser
			260					265					270		
Ala	Val	Pro	Gly	Asp	Leu	Leu	Thr	Leu	Pro	Gly	Thr	Thr	Glu	His	Leu
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290		295		300
Gln Phe Ile Ser Tyr Thr Lys Met His Pro Asn Asn Glu Asn Leu Pro				
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Gln Leu Ala Asn Met Phe Leu Gln Tyr Leu Ser Gln Ser Leu His				
	325		330	335

&lt;210&gt; 4391

&lt;211&gt; 988

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4391

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988

```

&lt;210&gt; 4392

&lt;211&gt; 211

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4392

Xaa Pro Phe Ser Trp Pro His Gly Ala Ser Pro Arg Ala Gln Gly His

```

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Pro Ser Met Gly Gly Pro Met Gln Arg Val Thr Pro Pro Arg Gly Met
      20           25           30
Ala Ser Val Gly Pro Gln Ser Tyr Gly Gly Gly Met Arg Pro Pro Pro
      35           40           45
Asn Ser Leu Ala Gly Pro Gly Leu Pro Ala Met Asn Met Gly Pro Gly
      50           55           60
Val Arg Gly Pro Trp Ala Ser Pro Ser Gly Asn Ser Ile Pro Tyr Ser
      65           70           75           80
Ser Ser Ser Pro Gly Ser Tyr Thr Gly Pro Pro Gly Gly Gly Gly Pro
      85           90           95
Pro Gly Thr Pro Ile Met Pro Ser Pro Gly Asp Ser Thr Asn Ser Ser
      100          105          110
Glu Asn Met Tyr Thr Ile Met Asn Pro Ile Gly Gln Gly Ala Gly Arg
      115          120          125
Ala Asn Phe Pro Leu Gly Pro Gly Pro Glu Gly Pro Met Ala Ala Met
      130          135          140
Ser Ala Met Glu Pro His Val Asn Gly Ser Leu Gly Ser Gly Asp
      145          150          155          160
Met Asp Gly Leu Pro Lys Ser Ser Pro Gly Ala Val Ala Gly Leu Ser
      165          170          175
Asn Ala Pro Gly Thr Pro Arg Asp Asp Gly Glu Met Ala Ala Ala Gly
      180          185          190
Thr Phe Leu His Pro Phe Pro Ser Glu Ser Tyr Ser Pro Gly Met Thr
      195          200          205
Met Ser Val
      210

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&lt;210&gt; 4393

&lt;211&gt; 2171

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4393

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<210> 4394  
 <211> 428  
 <212> PRT  
 <213> Homo sapiens

<400> 4394

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Asp Pro Glu Arg Ser Ser Pro Ala Leu Gly Val Ala Gly Arg Ser Arg
      35           40           45
Glu Lys Leu Gln Arg Val Leu Glu Lys Ala Ala Leu Lys Leu Gly Arg
      50           55           60
Pro Thr Leu Ser Ser Glu Val Gly Ile Ile Ile Cys Asp Ile Ala Asn
 65           70           75           80
Pro Ala Ser Leu Asp Glu Met Ala Lys Gln Ala Thr Val Val Leu Asn
      85           90           95
Cys Val Gly Pro Tyr Arg Phe Tyr Gly Glu Pro Val Ile Lys Ala Cys
      100          105          110
Ile Glu Asn Gly Ala Ser Cys Ile Asp Ile Ser Gly Glu Pro Gln Phe
      115          120          125
Leu Glu Leu Met Gln Leu Lys Tyr His Glu Lys Ala Ala Asp Lys Gly
      130          135          140
Val Tyr Ile Ile Gly Ser Ser Gly Phe Asp Ser Ile Pro Ala Asp Leu
 145          150          155          160
Gly Val Ile Tyr Thr Arg Asn Lys Met Asn Gly Thr Leu Thr Ala Val
      165          170          175
Glu Ser Phe Leu Thr Ile His Ser Gly Pro Glu Gly Leu Ser Ile His
      180          185          190
Asp Gly Thr Trp Lys Ser Ala Ile Tyr Gly Phe Gly Asp Gln Ser Asn
      195          200          205
Leu Arg Lys Leu Arg Asn Val Ser Asn Leu Lys Pro Val Pro Leu Ile
      210          215          220
Gly Pro Lys Leu Lys Arg Arg Trp Pro Ile Ser Tyr Cys Arg Glu Leu
 225          230          235          240
Lys Gly Tyr Ser Ile Pro Phe Met Gly Ser Asp Val Ser Val Val Arg
      245          250          255
Arg Thr Gln Arg Tyr Leu Tyr Glu Asn Leu Glu Glu Ser Pro Val Gln
      260          265          270
Tyr Ala Ala Tyr Val Thr Val Gly Gly Ile Thr Ser Val Ile Lys Leu
      275          280          285
Met Phe Ala Gly Leu Phe Phe Leu Phe Phe Val Arg Phe Gly Ile Gly
      290          295          300
Arg Gln Leu Leu Ile Lys Phe Pro Trp Phe Phe Ser Phe Gly Tyr Phe
 305          310          315          320
Ser Lys Gln Gly Pro Thr Gln Lys Gln Ile Asp Ala Ala Ser Phe Thr
      325          330          335
Leu Thr Phe Phe Gly Gln Gly Tyr Ser Gln Gly Thr Gly Thr Asp Lys
      340          345          350
Asn Lys Pro Asn Ile Lys Ile Cys Thr Gln Val Lys Gly Pro Glu Ala
      355          360          365
Gly Tyr Val Ala Thr Pro Ile Ala Met Val Gln Ala Ala Met Thr Leu

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370		375		380
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385		390		395
Gly Ala Ala Phe Ser Lys Thr Lys Leu Ile Asp Arg Leu Asn Lys His				400
	405		410	415
Gly Ile Glu Phe Ser Val Ile Ser Ser Ser Glu Val				
	420		425	

&lt;210&gt; 4395

&lt;211&gt; 1893

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4395

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1080
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1200

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 1893

&lt;210&gt; 4396

&lt;211&gt; 463

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4396

Met	Ala	Thr	Ser	Lys	Leu	Pro	Val	Val	Pro	Gly	Glu	Glu	Glu	Asn	Thr
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Ile	Leu	Met	Ala	Lys	Glu	Arg	Leu	Glu	Ala	Leu	Arg	Thr	Ala	Phe	Glu
			20					25					30		
Ser	Gly	Asp	Leu	Pro	Gln	Ala	Ala	Ser	His	Leu	Gln	Glu	Leu	Leu	Ala
		35				40						45			
Ser	Thr	Glu	Ser	Ile	Arg	Leu	Glu	Val	Gly	Val	Thr	Gly	Glu	Ser	Gly
	50				55					60					
Ala	Gly	Lys	Ser	Ser	Leu	Ile	Asn	Ala	Leu	Arg	Gly	Leu	Glu	Ala	Glu
65					70					75				80	
Asp	Pro	Gly	Ala	Ala	Leu	Thr	Gly	Val	Met	Glu	Thr	Thr	Met	Gln	Pro
			85					90						95	
Ser	Pro	Tyr	Pro	His	Pro	Gln	Phe	Pro	Asp	Val	Thr	Leu	Trp	Asp	Leu
			100					105					110		
Pro	Gly	Ala	Gly	Ser	Pro	Gly	Cys	Pro	Ala	Asp	Lys	Tyr	Leu	Lys	Gln
	115					120						125			
Val	Asp	Phe	Ser	Arg	Tyr	Asp	Phe	Phe	Leu	Leu	Val	Ser	Pro	Arg	Arg
	130					135					140				
Cys	Gly	Ala	Val	Glu	Thr	Arg	Leu	Ala	Ala	Glu	Ile	Leu	Cys	Gln	Gly
145					150					155				160	
Lys	Lys	Phe	Tyr	Phe	Val	Arg	Thr	Lys	Val	Asp	Glu	Asp	Leu	Ala	Ala
			165					170					175		
Thr	Arg	Thr	Gln	Arg	Pro	Ser	Gly	Phe	Arg	Glu	Ala	Ala	Val	Leu	Gln

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 Glu Ile Arg Asp His Cys Ala Glu Arg Leu Arg Glu Ala Gly Val Ala  
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 Asp Pro Arg Ile Phe Leu Val Ser Asn Leu Ser Pro Ala Arg Tyr Asp  
 210 215 220  
 Phe Pro Thr Leu Val Ser Thr Trp Glu His Asp Leu Pro Ser His Arg  
 225 230 235 240  
 Arg His Ala Gly Leu Leu Ser Leu Pro Asp Ile Ser Leu Glu Ala Leu  
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 Gln Lys Lys Lys Ala Met Leu Gln Glu Gln Val Leu Lys Thr Ala Leu  
 260 265 270  
 Val Leu Gly Val Ile Gln Ala Leu Pro Val Pro Gly Leu Ala Ala Ala  
 275 280 285  
 Tyr Asp Asp Ala Leu Leu Ile His Ser Leu Arg Gly Tyr His Arg Ser  
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 Phe Gly Leu Asp Asp Asp Ser Leu Ala Lys Leu Ala Glu Gln Val Gly  
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 Lys Gln Ala Gly Asp Leu Arg Ser Val Ile Arg Ser Pro Leu Ala Asn  
 325 330 335  
 Glu Val Ser Pro Glu Thr Val Leu Arg Leu Tyr Ser Gln Ser Ser Asp  
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 Gly Thr Leu Val Ala Gly Gly Ile Ser Phe Gly Ala Val Tyr Thr Met  
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 Leu Gln Gly Cys Leu Asn Glu Met Ala Glu Asp Ala Gln Arg Val Arg  
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 Ile Lys Ala Leu Glu Asp Asp Glu Pro Gln Pro Glu Val Ser Leu Glu  
 405 410 415  
 Val Ala Ser Asp Asn Gly Val Glu Lys Gly Gly Ser Gly Glu Gly Gly  
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 Gly Glu Glu Ala Pro Leu Ser Thr Cys Arg Lys Leu Gly Leu Leu Leu  
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 Lys Tyr Ile Leu Asp Ser Trp Lys Lys His Asp Ser Glu Glu Lys  
 450 455 460

&lt;210&gt; 4397

&lt;211&gt; 2543

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4397

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<213> Homo sapiens

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Val Val Lys Lys Glu Leu Arg Ala Ser Gly Ser Ser Gln Arg Met Leu		270
	275	280
Gln Trp Leu Ala Thr Lys Ser Pro Lys Lys Glu Asp Ser Lys Thr Pro		285
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Gln Lys Glu Glu Ser Asp Val Pro Gln Trp Ser Ser Gln Phe Leu Gln		300
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Lys Ser Pro Leu Pro Thr Lys Arg Gly Thr Ala Gly Leu Leu Glu Gln		320
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&lt;211&gt; 723

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4399

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&lt;210&gt; 4402

&lt;211&gt; 252

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4402

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Ile	Ser	Arg	Asn	Glu	Glu	Lys	Leu	Gln	Val	Val	Ala	Lys	Asp	Ile	Ala
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&lt;210&gt; 4403

&lt;211&gt; 4237

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4403

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305           310           315           320
Leu Asp Val Thr Asp Glu Glu Ile Tyr Tyr Val Ala Lys Asp Ala His
325           330           335
Arg Lys Ala Thr Lys Ala Pro Ala Lys Gln Leu Ala Gln Ser Ser Ala
340           345           350
Leu Ala Ser Leu Thr Gly Leu Gly Gly Leu Gly Gly Tyr Gly Ser Gly
355           360           365
Asp Ser Glu Asp Glu Arg Ser Asp Arg Gly Ser Glu Ser Ser Asp Thr

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 Glu Glu Lys Gln Gln Thr Glu Arg Val Thr Lys Glu Met Asn Glu Phe  
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 Ile His Lys Glu Gln Asn Ser Leu Ser Leu Leu Glu Ala Arg Glu Ala  
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 Asp Gly Asp Val Val Asn Glu Lys Lys Arg Thr Pro Asn Glu Thr Thr  
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 Ser Val Leu Glu Pro Lys Lys Glu His Lys Glu Lys Glu Lys Gln Gly  
 465 470 475 480  
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 485 490 495  
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 Lys Lys Arg His Ser Arg Ser Arg Ser Pro Thr Ile Lys Ala Arg Arg  
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 545 550 555 560  
 Ala Arg Val Lys Ile Arg Asp Arg Arg Arg Ser Asn Arg Asn Ser Ile  
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 Glu Arg Glu Arg Arg Arg Asn Arg Ser Pro Ser Arg Glu Arg Arg Arg  
 580 585 590  
 Ser Arg Ser Arg Ser Arg Asp Arg Arg Thr Asn Arg Ala Ser Arg Ser  
 595 600 605  
 Arg Ser Arg Asp Arg Arg Lys Ile Asp Asp Gln Arg Gly Asn Leu Ser  
 610 615 620  
 Gly Asn Ser His Lys His Lys Gly Glu Ala Lys Glu Gln Glu Arg Lys  
 625 630 635 640  
 Lys Glu Arg Ser Arg Ser Ile Asp Lys Asp Arg Lys Lys Lys Asp Lys  
 645 650 655  
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 Glu Lys Asp Phe Lys Phe Ser Ser Gln Asp Asp Arg Leu Lys Arg Lys  
 675 680 685  
 Arg Glu Ser Glu Arg Thr Phe Ser Arg Ser Gly Ser Ile Ser Val Lys  
 690 695 700  
 Ile Ile Arg His Asp Ser Arg Gln Asp Ser Lys Lys Ser Thr Thr Lys  
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 Asp Ser Lys Lys His Ser Gly Ser Asp Ser Ser Gly Arg Ser Ser Ser  
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 Glu Ser Pro Gly Ser Ser Lys Glu Lys Lys Ala Lys Lys Pro Lys His  
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 770 775

&lt;210&gt; 4405

&lt;211&gt; 918

<212> DNA  
<213> Homo sapiens

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 180  
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 918

<210> 4406  
 <211> 138  
 <212> PRT  
 <213> Homo sapiens

<400> 4406  
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 Lys Glu Leu Tyr Asp His Ala Glu Ala Thr Ile Val Val Met Leu Val  
 35 40 45  
 Gly Asn Lys Ser Asp Leu Ser Gln Ala Arg Glu Val Pro Thr Glu Glu  
 50 55 60  
 Ala Arg Met Phe Ala Glu Asn Asn Gly Leu Leu Phe Leu Glu Thr Ser  
 65 70 75 80  
 Ala Leu Asp Ser Thr Asn Val Glu Leu Ala Phe Glu Thr Val Leu Lys

	85		90		95
Glu Ile Phe	Ala Lys Val Ser Lys	Gln Arg Gln Asn Ser Ile Arg Thr			
	100	105	110		
Asn Ala Ile Thr Leu Gly Ser	Ala Gln Ala Gly Gln Glu Pro Gly Pro				
	115	120	125		
Gly Glu Lys Arg Ala Cys Cys Ile Ser Leu					
	130	135			

<210> 4407  
 <211> 974  
 <212> DNA  
 <213> Homo sapiens

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<210> 4408  
 <211> 158  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 4408

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      20             25             30
Ala Tyr Asp Met Val Leu Val Glu Asp Glu Glu Val Asn Arg Met His
      35             40             45
Glu Ser Leu His Leu Phe Asn Ser Ile Cys Asn His Lys Tyr Phe Ser
      50             55             60
Thr Thr Ser Ile Val Leu Phe Leu Asn Lys Lys Asp Ile Phe Gln Glu
65             70             75             80
Lys Val Thr Lys Val His Leu Ser Ile Cys Phe Pro Glu Tyr Thr Gly
      85             90             95
Pro Asn Thr Phe Glu Asp Ala Gly Asn Tyr Ile Lys Asn Gln Phe Leu
      100            105            110
Asp Leu Asn Leu Lys Lys Glu Asp Lys Glu Ile Tyr Ser His Met Thr
      115            120            125
Cys Ala Thr Asp Thr Gln Asn Val Lys Phe Val Phe Asp Ala Val Thr
      130            135            140
Asp Ile Ile Ile Lys Glu Asn Leu Lys Asp Cys Gly Leu Phe
145            150            155

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&lt;210&gt; 4409

&lt;211&gt; 4217

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4409

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780

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<210> 4410  
 <211> 405  
 <212> PRT  
 <213> Homo sapiens

<400> 4410  
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 Ser His Met Ala Thr Arg Ser Arg Glu Asn Ala Arg Arg Arg Gly Thr  
 35 40 45  
 Pro Glu Pro Glu Glu Ala Gly Arg Arg Gly Gly Lys Arg Pro Lys Pro  
 50 55 60  
 Pro Pro Gly Val Ala Ser Ala Arg Gly Gly Pro Pro Ala Thr Asp  
 65 70 75 80  
 Gly Leu Gly Ala Lys Val Lys Leu Glu Glu Lys Gln His His Pro Cys  
 85 90 95  
 Gln Lys Cys Pro Arg Val Phe Asn Asn Arg Trp Tyr Leu Glu Lys His  
 100 105 110  
 Met Asn Val Thr His Ser Arg Met Gln Ile Cys Asp Gln Cys Gly Lys  
 115 120 125  
 Arg Phe Leu Leu Glu Ser Glu Leu Leu Leu His Arg Gln Thr Asp Cys  
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 Glu Arg Asn Ile Gln Cys Val Thr Cys Gly Lys Ala Phe Lys Lys Leu  
 145 150 155 160  
 Trp Ser Leu His Glu His Asn Lys Ile Val His Gly Tyr Ala Glu Lys  
 165 170 175  
 Lys Phe Ser Cys Glu Ile Cys Glu Lys Lys Phe Tyr Thr Met Ala His  
 180 185 190  
 Val Arg Lys His Met Val Ala His Thr Lys Asp Met Pro Phe Thr Cys  
 195 200 205  
 Glu Thr Cys Gly Lys Ser Phe Lys Arg Ser Met Ser Leu Lys Val His  
 210 215 220  
 Ser Leu Gln His Ser Gly Glu Lys Pro Phe Arg Cys Glu Asn Cys Asp  
 225 230 235 240  
 Glu Arg Phe Gln Tyr Lys Tyr Gln Leu Arg Ser His Met Ser Ile His  
 245 250 255  
 Ile Gly His Lys Gln Phe Met Cys Gln Trp Cys Gly Lys Asp Phe Asn  
 260 265 270  
 Met Lys Gln Tyr Phe Asp Glu His Met Lys Thr His Thr Gly Glu Lys  
 275 280 285  
 Pro Phe Ile Cys Glu Ile Cys Gly Lys Ser Phe Thr Ser Arg Pro Asn  
 290 295 300  
 Met Lys Arg His Arg Arg Thr His Thr Gly Glu Lys Pro Tyr Pro Cys



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305          310          315          320
Asp Val Cys Gly Gln Arg Phe Arg Phe Ser Asn Met Leu Lys Ala His
          325          330          335
Lys Glu Lys Cys Phe Arg Val Ser His Thr Leu Ala Gly Asp Gly Val
          340          345          350
Pro Ala Ala Pro Gly Leu Pro Pro Thr Gln Pro Gln Ala His Ala Leu
          355          360          365
Pro Leu Leu Pro Gly Leu Pro Gln Thr Leu Pro Pro Pro His Leu
          370          375          380
Pro Pro Pro Pro Pro Leu Phe Pro Thr Thr Ala Ser Pro Gly Gly Arg
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Met Asn Ala Asn Asn
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<210> 4411  
 <211> 484  
 <212> DNA  
 <213> Homo sapiens

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484

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<210> 4412  
 <211> 113  
 <212> PRT  
 <213> Homo sapiens

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<400> 4412
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Leu Ser Ile Lys Glu Glu Gly Pro Arg Leu Gly Leu Gly Gly Leu Gly
          20          25          30
Ala Gln Ala Val Cys Pro Leu Phe Ser Ser Trp Cys Pro Ala Pro Pro
          35          40          45
Arg Cys His Leu Pro Gln Trp Gln Trp Gly Phe Ile Thr Gly Ser Ser
          50          55          60
Gly Pro Leu Pro Met Ala Gly Gly Val Pro Gly Gly Pro Asn Gln Ala

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<211> 65  
 <212> PRT  
 <213> Homo sapiens

<400> 4414  
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 Asp Thr Gly Val Lys Tyr Gly Leu Val Gly Leu Glu Pro Thr Lys Val  
 50 55 60  
 Pro  
 65

<210> 4415  
 <211> 775  
 <212> DNA  
 <213> Homo sapiens

<400> 4415  
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<210> 4416  
 <211> 100  
 <212> PRT  
 <213> Homo sapiens

&lt;400&gt; 4416

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      20           25           30
Arg Leu Arg Cys Arg Thr Leu Met Phe Ile Thr Ser Ser Tyr Pro Lys
      35           40           45
Arg Asn Gly Phe Arg His Val Leu Ser Gln Gln Glu Ile Asp Phe Phe
      50           55           60
Leu Asn Tyr Leu Ile Leu Leu Pro Asn Ile Thr Glu Val Met Arg Ser
      65           70           75           80
Leu Val Thr Phe Gly Cys Cys Ala Leu Lys Glu Pro Gly Leu Glu Phe
      85           90           95
Val Gly Val Ile
      100

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&lt;210&gt; 4417

&lt;211&gt; 980

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4417

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<211> 263  
<212> PRT  
<213> Homo sapiens

<400> 4418  
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Glu Val Met Arg Glu Met Thr Lys Lys Leu Tyr Ser Gln Tyr Glu Glu  
35 40 45  
Lys Leu Gln Glu Glu Gln Arg Lys His Ser Ala Glu Lys Glu Ala Leu  
50 55 60  
Leu Glu Glu Thr Asn Ser Phe Leu Lys Ala Ile Glu Glu Ala Asn Lys  
65 70 75 80  
Lys Met Gln Ala Ala Glu Ile Ser Leu Glu Glu Lys Asp Gln Arg Ile  
85 90 95  
Gly Glu Leu Asp Arg Leu Ile Glu Arg Met Glu Lys Glu Arg His Gln  
100 105 110  
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115 120 125  
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145 150 155 160  
Gln Lys Lys Val Lys Gln Met Val Glu Glu Ile Glu Ser Leu Lys Lys  
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195 200 205  
Leu Thr Glu Thr Gln Ala Lys Thr Glu Val Glu Thr Arg Glu Ile Gly  
210 215 220  
Val Gly Cys Asp Leu Leu Pro Ser Pro Thr Gly Arg Thr Arg Glu Ile  
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<212> DNA  
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<210> 4420

<211> 91

<212> PRT

<213> Homo sapiens

<400> 4420

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			20					25					30		
Trp	Cys	Asp	Leu	Gly	Ser	Leu	Gln	Pro	Pro	Pro	Pro	Gln	Leu	Lys	Gln
		35					40					45			
Leu	Ser	Cys	Pro	Ser	His	Pro	Ser	Xaa	Asn	Tyr	Arg	Pro	Val	Pro	Pro
	50				55					60					
His	Pro	Ala	Asn	Phe	Cys	Ile	Phe	Ser	Arg	Asp	Gly	Val	Ser	Pro	Tyr
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<210> 4421

<211> 1356

<212> DNA

<213> Homo sapiens

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<210> 4422

<211> 58

<212> PRT

<213> Homo sapiens

<400> 4422

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			20					25					30		
Thr	Trp	Gln	Asn	Pro	Val	Ser	Thr	Lys	Asn	Thr	Lys	Ile	Cys	Arg	Ala
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<210> 4423

<211> 2673

<212> DNA

<213> Homo sapiens

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<211> 768

<212> PRT

<213> Homo sapiens

<400> 4424

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			20					25					30		
Ser	Gly	Asp	Glu	Glu	Glu	Glu	Gly	Pro	Ile	Val	Leu	Gly	Arg	Arg	Gln
			35					40					45		
Lys	Ala	Leu	Gly	Lys	Asn	Arg	Ser	Ala	Asp	Phe	Asn	Pro	Asp	Phe	Val
			50				55				60				
Phe	Thr	Glu	Lys	Glu	Gly	Thr	Tyr	Asp	Gly	Ser	Trp	Ala	Leu	Ala	Asp
			65				70				75			80	
Val	Met	Ser	Gln	Leu	Lys	Lys	Lys	Arg	Ala	Ala	Thr	Thr	Leu	Asp	Glu
							85				90			95	
Lys	Ile	Glu	Lys	Val	Arg	Lys	Lys	Arg	Lys	Thr	Glu	Asp	Lys	Glu	Ala
							100				105			110	
Lys	Ser	Gly	Lys	Leu	Glu	Lys	Glu	Lys	Glu	Ala	Lys	Glu	Gly	Ser	Glu

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Thr Lys Ala Asp Thr Leu Lys Val Lys Asp Arg Lys Lys Lys Lys Lys
      165              170              175
Lys Gly Gln Glu Ala Gly Gly Phe Phe Glu Asp Ala Ser Gln Tyr Asp
      180              185              190
Glu Asn Leu Ser Phe Gln Asp Met Asn Leu Ser Arg Pro Leu Leu Lys
      195              200              205
Ala Ile Thr Ala Met Gly Phe Lys Gln Pro Thr Pro Ile Gln Lys Ala
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Cys Ile Pro Val Gly Leu Leu Gly Lys Asp Ile Cys Ala Cys Ala Ala
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Leu Ile Tyr Lys Pro Arg Gln Ala Pro Val Thr Arg Val Leu Val Leu
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Val Pro Thr Arg Glu Leu Gly Ile Gln Val His Ser Val Thr Arg Gln
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Phe His Leu Ser Ser Ile Glu Val Leu Ile Leu Asp Glu Ala Asp Arg
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Glu Ala Leu Arg Arg Phe Lys Asp Glu Gln Ile Asp Ile Leu Val Ala
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Ile Asn Phe Thr Met Pro Asn Thr Ile Lys His Tyr Val His Arg Val
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Gly Arg Thr Ala Arg Ala Gly Arg Ala Gly Arg Ser Val Ser Leu Val
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Gly Glu Asp Glu Arg Lys Met Leu Lys Glu Ile Val Lys Ala Ala Lys

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Leu Glu Ala Glu Glu Lys Glu Met Gln Gln Ser Glu Ala Gln Ile Asn
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Thr Ala Lys Arg Leu Leu Glu Lys Gly Lys Glu Ala Val Val Gln Glu
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Pro Glu Arg Ser Trp Phe Gln Thr Lys Glu Glu Arg Lys Lys Glu Lys
625          630          635          640
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Lys Arg Lys Lys Phe Met Lys Asp Ala Lys Lys Lys Gly Glu Met Thr
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Ala Glu Glu Arg Ser Gln Phe Glu Ile Leu Lys Ala Gln Met Phe Ala
          675          680          685
Glu Arg Leu Ala Lys Arg Asn Arg Arg Ala Lys Arg Ala Arg Ala Met
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Pro Glu Glu Glu Pro Val Arg Gly Pro Ala Lys Lys Gln Lys Gln Gly
705          710          715          720
Lys Lys Ser Val Phe Asp Glu Glu Leu Thr Asn Thr Ser Lys Lys Ala
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5199

&lt;210&gt; 4426

&lt;211&gt; 1116

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4426

Met Ala Ala Met Ala Pro Ala Leu Thr Asp Ala Ala Ala Glu Ala His

1	5	10	15
His Ile Arg Phe Lys Leu Ala Pro Pro Ser Ser Thr Leu Ser Pro Gly			
20	25	30	
Ser Ala Glu Asn Asn Gly Asn Ala Asn Ile Leu Ile Ala Ala Asn Gly			
35	40	45	
Thr Lys Arg Lys Ala Ile Ala Ala Glu Asp Pro Ser Leu Asp Phe Arg			
50	55	60	
Asn Asn Pro Thr Lys Glu Asp Leu Gly Lys Leu Gln Pro Leu Val Ala			
65	70	75	80
Ser Tyr Leu Cys Ser Asp Val Thr Ser Val Pro Ser Lys Glu Ser Leu			
85	90	95	
Lys Leu Gln Gly Val Phe Ser Lys Gln Thr Val Leu Lys Ser His Pro			
100	105	110	
Leu Leu Ser Gln Ser Tyr Glu Leu Arg Ala Glu Leu Leu Gly Arg Gln			
115	120	125	
Pro Val Leu Glu Phe Ser Leu Glu Asn Leu Arg Thr Met Asn Thr Ser			
130	135	140	
Gly Gln Thr Ala Leu Pro Gln Ala Pro Val Asn Gly Leu Ala Lys Lys			
145	150	155	160
Leu Thr Lys Ser Ser Thr His Ser Asp His Asp Asn Ser Thr Ser Leu			
165	170	175	
Asn Gly Gly Lys Arg Ala Leu Thr Ser Ser Ala Leu His Gly Gly Glu			
180	185	190	
Met Gly Gly Ser Glu Ser Gly Asp Leu Lys Gly Gly Met Thr Asn Cys			
195	200	205	
Thr Leu Pro His Arg Ser Leu Asp Val Glu His Thr Thr Leu Tyr Ser			
210	215	220	
Asn Asn Ser Thr Ala Asn Lys Ser Phe Val Asn Ser Met Glu Gln Pro			
225	230	235	240
Ala Leu Gln Gly Ser Ser Arg Leu Ser Pro Gly Thr Asp Ser Ser Ser			
245	250	255	
Asn Leu Gly Gly Val Lys Leu Glu Gly Lys Lys Ser Pro Leu Ser Ser			
260	265	270	
Ile Leu Phe Ser Ala Leu Asp Ser Asp Thr Arg Ile Thr Ala Leu Leu			
275	280	285	
Arg Arg Gln Ala Asp Ile Glu Ser Arg Ala Arg Arg Leu Gln Lys Arg			
290	295	300	
Leu Gln Val Val Gln Ala Lys Gln Val Glu Arg His Ile Gln His Gln			
305	310	315	320
Leu Gly Gly Phe Leu Glu Lys Thr Leu Ser Lys Leu Pro Asn Leu Glu			
325	330	335	
Ser Leu Arg Pro Arg Ser Gln Leu Met Leu Thr Arg Lys Ala Glu Ala			
340	345	350	
Ala Leu Arg Lys Ala Ala Ser Glu Thr Thr Thr Ser Glu Gly Leu Ser			
355	360	365	
Asn Phe Leu Lys Ser Asn Ser Ile Ser Glu Glu Leu Glu Arg Phe Thr			
370	375	380	
Ala Ser Gly Ile Ala Asn Leu Arg Cys Ser Glu Gln Ala Phe Asp Ser			
385	390	395	400
Asp Val Thr Asp Ser Ser Ser Gly Gly Glu Ser Asp Ile Glu Glu Glu			
405	410	415	
Glu Leu Thr Arg Ala Asp Pro Glu Gln Arg His Val Pro Leu Arg Arg			
420	425	430	
Arg Ser Glu Trp Lys Trp Ala Ala Asp Arg Ala Ala Ile Val Ser Arg			

435 440 445  
 Trp Asn Trp Leu Gln Ala His Val Ser Asp Leu Glu Tyr Arg Ile Arg  
 450 455 460  
 Gln Gln Thr Asp Ile Tyr Lys Gln Ile Arg Ala Asn Lys Gly Leu Ile  
 465 470 475 480  
 Val Leu Gly Glu Val Pro Pro Pro Glu His Thr Thr Asp Leu Phe Leu  
 485 490 495  
 Pro Leu Ser Ser Glu Val Lys Thr Asp His Gly Thr Asp Lys Leu Ile  
 500 505 510  
 Glu Ser Val Ser Gln Pro Leu Glu Asn His Gly Ala Pro Ile Ile Gly  
 515 520 525  
 His Ile Ser Glu Ser Leu Ser Thr Lys Ser Cys Gly Ala Leu Arg Pro  
 530 535 540  
 Val Asn Gly Val Ile Asn Thr Leu Gln Pro Val Leu Ala Asp His Ile  
 545 550 555 560  
 Pro Gly Asp Ser Ser Asp Ala Glu Glu Gln Leu His Lys Lys Gln Arg  
 565 570 575  
 Leu Asn Leu Val Ser Ser Ser Ser Asp Gly Thr Cys Val Ala Ala Arg  
 580 585 590  
 Thr Arg Pro Val Leu Ser Cys Lys Lys Arg Arg Leu Val Arg Pro Asn  
 595 600 605  
 Ser Ile Val Pro Leu Ser Lys Lys Val His Arg Asn Ser Thr Ile Arg  
 610 615 620  
 Pro Gly Cys Asp Val Asn Pro Ser Cys Ala Leu Cys Gly Ser Gly Ser  
 625 630 635 640  
 Ile Asn Thr Met Pro Pro Glu Ile His Tyr Glu Ala Pro Leu Leu Glu  
 645 650 655  
 Arg Leu Ser Gln Leu Asp Ser Cys Val His Pro Val Leu Ala Phe Pro  
 660 665 670  
 Asp Asp Val Pro Thr Ser Leu His Phe Gln Ser Met Leu Lys Ser Gln  
 675 680 685  
 Trp Gln Asn Lys Pro Phe Asp Lys Ile Lys Pro Pro Lys Lys Leu Ser  
 690 695 700  
 Leu Lys His Arg Ala Pro Met Pro Gly Ser Leu Pro Asp Ser Ala Arg  
 705 710 715 720  
 Lys Asp Arg His Lys Leu Val Ser Ser Phe Leu Thr Thr Ala Lys Leu  
 725 730 735  
 Ser His His Gln Thr Arg Pro Asp Arg Thr His Arg Gln His Leu Asp  
 740 745 750  
 Asp Val Gly Ala Val Pro Met Val Glu Arg Val Thr Ala Pro Lys Ala  
 755 760 765  
 Glu Arg Leu Leu Asn Pro Pro Pro Val His Asp Pro Asn His Ser  
 770 775 780  
 Lys Met Arg Leu Arg Asp His Ser Ser Glu Arg Ser Glu Val Leu Lys  
 785 790 795 800  
 His His Thr Asp Met Ser Ser Ser Ser Tyr Leu Ala Ala Thr His His  
 805 810 815  
 Pro Pro His Ser Pro Leu Val Arg Gln Leu Ser Thr Ser Ser Asp Ser  
 820 825 830  
 Pro Ala Pro Ala Ser Ser Ser Ser Gln Val Thr Ala Ser Thr Ser Gln  
 835 840 845  
 Gln Pro Val Arg Arg Arg Arg Gly Glu Ser Ser Phe Asp Ile Asn Asn  
 850 855 860  
 Ile Val Ile Pro Met Ser Val Ala Ala Thr Thr Arg Val Glu Lys Leu



865                      870                      875                      880  
 Gln Tyr Lys Glu Ile Leu Thr Pro Ser Trp Arg Glu Val Asp Leu Gln  
                                  885                      890                      895  
 Ser Leu Lys Gly Ser Pro Asp Glu Glu Asn Glu Glu Ile Glu Asp Leu  
                                  900                      905                      910  
 Ser Asp Ala Ala Phe Ala Ala Leu His Ala Lys Cys Glu Glu Met Glu  
                                  915                      920                      925  
 Arg Ala Arg Trp Leu Trp Thr Thr Ser Val Pro Pro Gln Arg Arg Gly  
                                  930                      935                      940  
 Ser Arg Ser Tyr Arg Ser Ser Asp Gly Arg Thr Thr Pro Gln Leu Gly  
 945                      950                      955                      960  
 Ser Ala Asn Pro Ser Thr Pro Gln Pro Ala Ser Pro Asp Val Ser Ser  
                                  965                      970                      975  
 Ser His Ser Leu Ser Glu Tyr Ser His Gly Gln Ser Pro Arg Ser Pro  
                                  980                      985                      990  
 Ile Ser Pro Glu Leu His Ser Ala Pro Leu Thr Pro Val Ala Arg Asp  
                                  995                      1000                      1005  
 Thr Leu Arg His Leu Ala Ser Glu Asp Thr Arg Cys Ser Thr Pro Glu  
                                  1010                      1015                      1020  
 Leu Gly Leu Asp Glu Gln Ser Val Gln Pro Trp Glu Arg Arg Thr Phe  
 1025                      1030                      1035                      1040  
 Pro Leu Ala His Ser Pro Gln Ala Glu Cys Glu Asp Gln Leu Asp Ala  
                                  1045                      1050                      1055  
 Gln Glu Arg Ala Ala Arg Cys Thr Arg Arg Thr Ser Gly Ser Lys Thr  
                                  1060                      1065                      1070  
 Xaa Pro Gly Asp Arg Gly Ser Ala His Leu Ala Ser His Cys Pro Pro  
                                  1075                      1080                      1085  
 Gln Glu Ser Ala Ser Gly Gly Ser Ser His Ser Ser Ala Pro Asp Ser  
                                  1090                      1095                      1100  
 Gln Met Ser Gly Arg Gln Pro Ser Lys Gln Thr His  
 1105                      1110                      1115

&lt;210&gt; 4427

&lt;211&gt; 4474

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4427

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 4474

&lt;210&gt; 4428

&lt;211&gt; 763

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4428

Met	Val	Ala	Cys	Arg	Ala	Ile	Gly	Ile	Leu	Ser	Arg	Phe	Ser	Ala	Phe
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Arg	Ile	Leu	Arg	Ser	Arg	Gly	Tyr	Ile	Cys	Arg	Asn	Phe	Thr	Gly	Ser
		20						25					30		
Ser	Ala	Leu	Leu	Thr	Arg	Thr	His	Ile	Asn	Tyr	Gly	Val	Lys	Gly	Asp
		35					40					45			
Val	Ala	Val	Val	Arg	Ile	Asn	Ser	Pro	Asn	Ser	Lys	Val	Asn	Thr	Leu
		50				55					60				
Ser	Lys	Glu	Leu	His	Ser	Glu	Phe	Ser	Glu	Val	Met	Asn	Glu	Ile	Trp
65				70					75					80	
Ala	Ser	Asp	Gln	Ile	Arg	Ser	Ala	Val	Leu	Ile	Ser	Ser	Lys	Pro	Gly
		85						90					95		
Cys	Phe	Ile	Ala	Gly	Ala	Asp	Ile	Asn	Met	Leu	Ala	Ala	Cys	Lys	Thr
		100						105					110		
Leu	Gln	Glu	Val	Thr	Gln	Leu	Ser	Gln	Glu	Ala	Gln	Arg	Ile	Val	Glu
		115					120					125			
Lys	Leu	Glu	Lys	Ser	Thr	Lys	Pro	Ile	Val	Ala	Ala	Ile	Asn	Gly	Ser
		130				135					140				
Cys	Leu	Gly	Gly	Gly	Leu	Glu	Val	Ala	Ile	Ser	Cys	Gln	Tyr	Arg	Ile
145					150				155					160	
Ala	Thr	Lys	Asp	Arg	Lys	Thr	Val	Leu	Gly	Thr	Pro	Glu	Val	Leu	Leu

165 170 175  
 Gly Ala Leu Pro Gly Ala Gly Gly Thr Gln Arg Leu Pro Lys Met Val  
 180 185 190  
 Gly Val Pro Ala Ala Leu Asp Met Met Leu Thr Gly Arg Ser Ile Arg  
 195 200 205  
 Ala Asp Arg Ala Lys Lys Met Gly Leu Val Asp Gln Leu Val Glu Pro  
 210 215 220  
 Leu Gly Pro Gly Leu Lys Pro Pro Glu Glu Arg Thr Ile Glu Tyr Leu  
 225 230 235 240  
 Glu Glu Val Ala Ile Thr Phe Ala Lys Gly Leu Ala Asp Lys Lys Ile  
 245 250 255  
 Ser Pro Lys Arg Asp Lys Gly Leu Val Glu Lys Leu Thr Ala Tyr Ala  
 260 265 270  
 Met Thr Ile Pro Phe Val Arg Gln Gln Val Tyr Lys Lys Val Glu Glu  
 275 280 285  
 Lys Val Arg Lys Gln Thr Lys Gly Leu Tyr Pro Ala Pro Leu Lys Ile  
 290 295 300  
 Ile Asp Val Val Lys Thr Gly Ile Glu Gln Gly Ser Asp Ala Gly Tyr  
 305 310 315 320  
 Leu Cys Glu Ser Gln Lys Phe Gly Glu Leu Val Met Thr Lys Glu Ser  
 325 330 335  
 Lys Ala Leu Met Gly Leu Tyr His Gly Gln Val Leu Cys Lys Lys Asn  
 340 345 350  
 Lys Phe Gly Ala Pro Gln Lys Asp Val Lys His Leu Ala Ile Leu Gly  
 355 360 365  
 Ala Gly Leu Met Gly Ala Gly Ile Ala Gln Val Ser Val Asp Lys Gly  
 370 375 380  
 Leu Lys Thr Ile Leu Lys Asp Ala Thr Leu Thr Ala Leu Asp Arg Gly  
 385 390 395 400  
 Gln Gln Gln Val Phe Lys Gly Leu Asn Asp Lys Val Lys Lys Lys Ala  
 405 410 415  
 Leu Thr Ser Phe Glu Arg Asp Ser Ile Phe Ser Asn Leu Thr Gly Gln  
 420 425 430  
 Leu Asp Tyr Gln Gly Phe Glu Lys Ala Asp Met Val Ile Glu Ala Val  
 435 440 445  
 Phe Glu Asp Leu Ser Leu Lys His Arg Val Leu Lys Glu Val Glu Ala  
 450 455 460  
 Val Ile Pro Asp His Cys Ile Phe Ala Ser Asn Thr Ser Ala Leu Pro  
 465 470 475 480  
 Ile Ser Glu Ile Ala Ala Val Ser Lys Arg Pro Glu Lys Val Ile Gly  
 485 490 495  
 Met His Tyr Phe Ser Pro Val Asp Lys Met Gln Leu Leu Glu Ile Ile  
 500 505 510  
 Thr Thr Glu Lys Thr Ser Lys Asp Thr Ser Ala Ser Ala Val Ala Val  
 515 520 525  
 Gly Leu Lys Gln Gly Lys Val Ile Ile Val Val Lys Asp Gly Pro Gly  
 530 535 540  
 Phe Tyr Thr Thr Arg Cys Leu Ala Pro Met Met Ser Glu Val Ile Arg  
 545 550 555 560  
 Ile Leu Gln Glu Gly Val Asp Pro Lys Lys Leu Asp Ser Leu Thr Thr  
 565 570 575  
 Ser Phe Gly Phe Pro Val Gly Ala Ala Thr Leu Val Asp Glu Val Gly  
 580 585 590  
 Val Asp Val Ala Lys His Val Ala Glu Asp Leu Gly Lys Val Phe Gly

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      595              600              605
Glu Arg Phe Gly Gly Gly Asn Pro Glu Leu Leu Thr Gln Met Val Ser
      610              615              620
Lys Gly Phe Leu Gly Arg Lys Ser Gly Lys Gly Phe Tyr Ile Tyr Gln
625              630              635              640
Glu Gly Val Lys Arg Lys Asp Leu Asn Ser Asp Met Asp Ser Ile Leu
      645              650              655
Ala Ser Leu Lys Leu Pro Pro Lys Ser Glu Val Ser Ser Asp Glu Asp
      660              665              670
Ile Gln Phe Arg Leu Val Thr Arg Phe Val Asn Glu Ala Val Met Cys
      675              680              685
Leu Gln Glu Gly Ile Leu Ala Thr Pro Ala Glu Gly Asp Ile Gly Ala
      690              695              700
Val Phe Gly Leu Gly Phe Pro Pro Cys Leu Gly Gly Pro Phe Arg Phe
705              710              715              720
Val Asp Leu Tyr Gly Ala Gln Lys Ile Val Asp Arg Leu Lys Lys Tyr
      725              730              735
Glu Ala Ala Tyr Gly Lys Gln Phe Thr Pro Cys Gln Leu Leu Ala Asp
      740              745              750
His Ala Asn Ser Pro Asn Lys Lys Phe Tyr Gln
      755              760

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&lt;210&gt; 4429

&lt;211&gt; 981

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4429

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120
ctgcttgctc caactggctc catctctccg ttaccgggtga ggcaggcaca gtgctgcagt
180
ggcagaatgg aagtaccag gctgacttgc tctcagccag acacgacctc ttctctgagg
240
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300
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420
cccggctgtg cactacatt ccaaacctg gcacgcacgc gaaggcttgg ggcgccccgg
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660
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720
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780

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<210> 4430  
 <211> 151  
 <212> PRT  
 <213> Homo sapiens

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 Ser Ala Leu Pro Gln Val Asn Thr Arg Arg Glu Ser Leu Asn Arg Gln  
 35 40 45  
 Ala Pro Gln Pro Arg Arg Lys Pro Ser Phe Gln Thr Val Gly Ile Pro  
 50 55 60  
 Phe Ile Pro Trp His Arg Glu Pro Lys Gly Met Gln Thr Asp Pro Gly  
 65 70 75 80  
 Arg Ala Leu His Ser Gln Thr Leu Ala Arg Thr Arg Arg Leu Gly Ala  
 85 90 95  
 Pro Arg Arg Ala Leu Pro Pro Arg Pro Pro Pro Ala Asp Ser Pro  
 100 105 110  
 Leu Cys Glu Leu Asn His Leu Gly Ala Met Cys Arg Gly Arg Ala Ser  
 115 120 125  
 Ala Ser Glu Val Leu Gly Gly Pro Val Thr Ala Ser Arg Phe Tyr Gly  
 130 135 140  
 Xaa Pro Pro Pro Val Ser Trp  
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<210> 4431  
 <211> 507  
 <212> DNA  
 <213> Homo sapiens

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 180  
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 300  
 cccaaacaaa cgtgctgtgg tccctgcccg gtgtccacag tgccagcccc accctcccag  
 360

cccggtgccc atccctgcgg ggctgcagcc atccctctcc acagcaagga tgacgtggaa  
 420  
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 507

<210> 4432  
 <211> 57  
 <212> PRT  
 <213> Homo sapiens

<400> 4432  
 Gly Gly Glu Phe Arg Glu Ala Phe Lys Glu Ala Ser Lys Val Pro Phe  
 1 5 10 15  
 Cys Lys Phe His Leu Gly Asp Arg Pro Ile Pro Val Thr Phe Lys Arg  
 20 25 30  
 Ala Ile Ala Ala Leu Ser Phe Trp Gln Lys Val Arg Leu Ala Trp Gly  
 35 40 45  
 Leu Cys Phe Leu Ser Asp Pro Ile Arg  
 50 55

<210> 4433  
 <211> 447  
 <212> DNA  
 <213> Homo sapiens

<400> 4433  
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 gtgaccaaca tcaccaccgt cagcctctgg gaagaattct cctccagcga cctcgcatat  
 120  
 ctccgcttcc tggacatgag ccagaaccag ttccagtacc tgccagacgg cttcctgagg  
 180  
 aaaatgcctt ccctctccca cctgaacctc caccagaatt gcctgatgac gottcacatt  
 240  
 cgggagcacg agccccccgg agcgctcacc gagctggacc tgagccacaa ccagctgtcg  
 300  
 gagctgcacc tggctccggg gctggccagc tgctgggca gcctgcgctt gttcaacctg  
 360  
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 acacttgaca tgagccacaa tcagatc  
 447

<210> 4434  
 <211> 149  
 <212> PRT  
 <213> Homo sapiens

<400> 4434  
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 1 5 10 15  
 Val Asp Gly Asn Val Thr Asn Ile Thr Thr Val Ser Leu Trp Glu Glu



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                20                25                30
Phe Ser Ser Ser Asp Leu Ala Asp Leu Arg Phe Leu Asp Met Ser Gln
      35                40                45
Asn Gln Phe Gln Tyr Leu Pro Asp Gly Phe Leu Arg Lys Met Pro Ser
      50                55                60
Leu Ser His Leu Asn Leu His Gln Asn Cys Leu Met Thr Leu His Ile
      65                70                75                80
Arg Glu His Glu Pro Pro Gly Ala Leu Thr Glu Leu Asp Leu Ser His
      85                90                95
Asn Gln Leu Ser Glu Leu His Leu Ala Pro Gly Leu Ala Ser Cys Leu
      100                105                110
Gly Ser Leu Arg Leu Phe Asn Leu Ser Ser Asn Gln Leu Leu Gly Val
      115                120                125
Pro Pro Gly Leu Phe Ala Asn Ala Arg Asn Ile Thr Thr Leu Asp Met
      130                135                140
Ser His Asn Gln Ile
145

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&lt;210&gt; 4435

&lt;211&gt; 783

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4435

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120
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180
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240
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gttcacatta cagacttcaa catagcgacg gtagtgaaag gagcagaaag ggcttcctcc
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cta
783

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&lt;210&gt; 4436

<211> 261  
 <212> PRT  
 <213> Homo sapiens

<400> 4436  
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 20 25 30  
 Asp Glu Glu Asp Met Phe Met Val Val Asp Leu Leu Leu Gly Gly Asp  
 35 40 45  
 Leu Arg Tyr His Leu Gln Gln Asn Val His Phe Thr Glu Gly Thr Val  
 50 55 60  
 Lys Leu Tyr Ile Cys Glu Leu Ala Leu Ala Leu Glu Tyr Leu Gln Arg  
 65 70 75 80  
 Tyr His Ile Ile His Arg Asp Ile Lys Pro Asp Asn Ile Leu Leu Asp  
 85 90 95  
 Glu His Gly His Val His Ile Thr Asp Phe Asn Ile Ala Thr Val Val  
 100 105 110  
 Lys Gly Ala Glu Arg Ala Ser Ser Met Ala Gly Thr Lys Pro Tyr Met  
 115 120 125  
 Ala Pro Glu Val Phe Gln Val Tyr Met Asp Arg Gly Pro Gly Tyr Ser  
 130 135 140  
 Tyr Pro Val Asp Trp Trp Ser Leu Gly Ile Thr Ala Tyr Glu Leu Leu  
 145 150 155 160  
 Arg Gly Trp Arg Pro Tyr Glu Ile His Ser Val Thr Pro Ile Asp Glu  
 165 170 175  
 Ile Leu Asn Met Phe Lys Val Glu Arg Val His Tyr Ser Ser Thr Trp  
 180 185 190  
 Cys Lys Gly Met Val Ala Leu Leu Arg Lys Leu Leu Thr Lys Asp Pro  
 195 200 205  
 Glu Ser Arg Val Ser Ser Leu His Asp Ile Gln Ser Val Pro Tyr Leu  
 210 215 220  
 Ala Asp Met Asn Trp Asp Ala Val Phe Lys Lys Ala Leu Met Pro Gly  
 225 230 235 240  
 Phe Val Pro Asn Lys Gly Arg Leu Asn Cys Asp Pro Thr Phe Glu Leu  
 245 250 255  
 Glu Glu Met Ile Leu  
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<210> 4437  
 <211> 620  
 <212> DNA  
 <213> Homo sapiens

<400> 4437  
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 gtgtccatgc tgaagatgga cgagagcacg ctgctgcggg agggcccagga gctcagcctg  
 180  
 gagaagctgc agcaggccgt gaggcagaac gggctcatgt cggggctgat gcagatgctg  
 240

ctgctgaagg tgtctgcaca catcaccgag cagctgggca tggccccagg tggcgagttc  
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 420  
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 620

<210> 4438  
 <211> 206  
 <212> PRT  
 <213> Homo sapiens

<400> 4438  
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 20 25 30  
 Val Val Glu Leu Cys Gln Tyr Arg Val Ser Met Leu Lys Met Asp Glu  
 35 40 45  
 Ser Thr Leu Leu Arg Glu Ala Gln Glu Leu Ser Leu Glu Lys Leu Gln  
 50 55 60  
 Gln Ala Val Arg Gln Asn Gly Leu Met Ser Gly Leu Met Gln Met Leu  
 65 70 75 80  
 Leu Leu Lys Val Ser Ala His Ile Thr Glu Gln Leu Gly Met Ala Pro  
 85 90 95  
 Gly Gly Glu Phe Arg Glu Ala Phe Lys Glu Ala Ser Lys Val Pro Phe  
 100 105 110  
 Cys Lys Phe His Leu Gly Asp Arg Pro Ile Pro Val Thr Phe Lys Arg  
 115 120 125  
 Ala Ile Ala Ala Leu Ser Phe Trp Gln Lys Val Arg Leu Ala Trp Gly  
 130 135 140  
 Leu Cys Phe Leu Ser Asp Pro Ile Ser Lys Asp Asp Val Glu Arg Cys  
 145 150 155 160  
 Lys Gln Lys Asp Leu Leu Glu Gln Met Met Ala Glu Met Ile Gly Glu  
 165 170 175  
 Phe Pro Asp Leu His Arg Thr Ile Val Ser Glu Arg Asp Val Tyr Leu  
 180 185 190  
 Thr Tyr Met Leu Arg Gln Ala Ala Arg Arg Leu Glu Leu Pro  
 195 200 205

<210> 4439  
 <211> 2121  
 <212> DNA  
 <213> Homo sapiens

<400> 4439

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120  
tctaaaatta actttttattg ttagagacac atcttttagaa agttttgtaa atatcaacat  
180  
ttaccatctt attttttctt ttgagaccaa gcatcacaga ccaaaagcca caaagtttac  
240  
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360  
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420  
ttcacagtac tttggattta taaaagaccc cattatttta acttttgtgc aacctgtttg  
480  
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540  
agacatctta ctttcttgaa tttctactta acatccatgt ggtgcacttt ttcaggcatt  
600  
gtaataagtg caaataaata atcaattatt gatttctaaa aatctatacc aatagacaat  
660  
actcaggctt ggaaatattt tgaacactca gatataaaaa ttcagtaaac aatttatgca  
720  
tggtattttt tctccctgtc ctccctctcc ctccctccct cccctatcta tttggttaaa  
780  
aaaaaaaaag ttcaacttcg atttaagtcc tagggcctga caaagtgacc ctggataaat  
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1620

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<210> 4440

<211> 82

<212> PRT

<213> Homo sapiens

<400> 4440

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Leu	Arg	Phe	Ala	Phe	Ile	Asp	Val	Gly	Ile	Phe	Arg	Asn	Ser	Ala	Pro
		20					25					30			
Arg	Leu	Ser	Met	Ile	Gly	Ala	Asp	Ser	Ser	Glu	Glu	Lys	Phe	Leu	Arg
		35				40						45			
Arg	Ile	Gly	Arg	Phe	Gly	Tyr	Gly	Tyr	Gly	Pro	Tyr	Gln	Pro	Val	Pro
	50					55				60					
Glu	Gln	Pro	Leu	Tyr	Pro	Gln	Pro	Tyr	Gln	Pro	Gln	Tyr	Gln	Gln	Tyr
65					70					75					80
Thr	Phe														

<210> 4441

<211> 2055

<212> DNA

<213> Homo sapiens

<400> 4441

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1920

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 2040  
 caccggacca tgaca  
 2055

<210> 4442

<211> 517

<212> PRT

<213> Homo sapiens

<400> 4442

Met	Gly	Arg	Lys	Ser	Lys	Lys	Trp	Gly	Lys	Lys	Val	Ser	Arg	Tyr	Glu	1	5	10	15
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Trp	Lys	Glu	Lys	Val	Leu	Trp	Ala	Leu	Leu	Ala	Val	Leu	Leu	Ala	Ser	35	40	45	
Trp	Arg	Leu	Trp	Ala	Ile	Lys	Asp	Phe	Gln	Glu	Cys	Thr	Trp	Gln	Val	50	55	60	
Val	Leu	Asn	Glu	Phe	Lys	Arg	Val	Gly	Glu	Ser	Gly	Val	Ser	Asp	Ser	65	70	75	80
Phe	Phe	Glu	Gln	Glu	Pro	Val	Asp	Thr	Val	Ser	Ser	Leu	Phe	His	Met	85	90	95	
Leu	Val	Asp	Ser	Pro	Ile	Asp	Pro	Ser	Glu	Lys	Tyr	Leu	Gly	Phe	Pro	100	105	110	
Tyr	Tyr	Leu	Lys	Ile	Asn	Tyr	Ser	Cys	Glu	Glu	Lys	Pro	Ser	Glu	Asp	115	120	125	
Leu	Val	Arg	Met	Gly	His	Leu	Thr	Gly	Leu	Lys	Pro	Leu	Val	Leu	Val	130	135	140	
Thr	Phe	Gln	Ser	Pro	Val	Asn	Phe	Tyr	Arg	Trp	Lys	Ile	Glu	Gln	Leu	145	150	155	160
Gln	Ile	Gln	Met	Glu	Ala	Ala	Pro	Phe	Arg	Ser	Lys	Gly	Gly	Pro	Gly	165	170	175	
Gly	Gly	Gly	Arg	Asp	Arg	Asn	Leu	Ala	Gly	Met	Asn	Ile	Asn	Gly	Phe	180	185	190	
Leu	Lys	Arg	Asp	Arg	Asp	Asn	Asn	Ile	Gln	Phe	Thr	Val	Gly	Glu	Glu	195	200	205	
Leu	Phe	Asn	Leu	Met	Pro	Gln	Tyr	Phe	Val	Gly	Val	Ser	Ser	Arg	Pro	210	215	220	
Leu	Trp	His	Thr	Val	Asp	Gln	Ser	Pro	Val	Leu	Ile	Leu	Gly	Gly	Ile	225	230	235	240
Pro	Asn	Glu	Lys	Tyr	Val	Leu	Met	Thr	Asp	Thr	Ser	Phe	Lys	Asp	Phe	245	250	255	
Ser	Leu	Val	Glu	Val	Asn	Gly	Val	Gly	Gln	Met	Leu	Ser	Ile	Asp	Ser	260	265	270	
Cys	Trp	Val	Gly	Ser	Phe	Tyr	Cys	Pro	His	Ser	Gly	Phe	Thr	Ala	Thr	275	280	285	
Ile	Tyr	Asp	Thr	Ile	Ala	Thr	Glu	Ser	Thr	Leu	Phe	Ile	Arg	Gln	Asn	290	295	300	
Gln	Leu	Val	Tyr	Tyr	Phe	Thr	Gly	Thr	Tyr	Thr	Thr	Leu	Tyr	Glu	Arg	305	310	315	320
Asn	Arg	Gly	Ser	Gly	Glu	Cys	Ala	Val	Ala	Gly	Pro	Thr	Pro	Gly	Glu				

325 330 335  
 Gly Thr Leu Val Asn Pro Ser Thr Glu Gly Ser Trp Ile Arg Val Leu  
 340 345 350  
 Ala Ser Glu Cys Ile Lys Lys Leu Cys Pro Val Tyr Phe His Ser Asn  
 355 360 365  
 Gly Ser Glu Tyr Ile Met Ala Leu Thr Thr Gly Lys His Glu Gly Tyr  
 370 375 380  
 Val His Phe Gly Thr Ile Arg Val Thr Thr Cys Ser Ile Ile Trp Ser  
 385 390 395 400  
 Glu Tyr Ile Ala Gly Glu Tyr Thr Leu Leu Leu Val Glu Ser Gly  
 405 410 415  
 Tyr Gly Asn Ala Ser Lys Arg Phe Gln Val Val Ser Tyr Asn Thr Ala  
 420 425 430  
 Ser Asp Asp Leu Glu Leu Leu Tyr His Ile Pro Glu Phe Ile Pro Glu  
 435 440 445  
 Ala Arg Gly Leu Glu Phe Leu Met Ile Leu Gly Thr Glu Ser Tyr Thr  
 450 455 460  
 Ser Thr Ala Met Ala Pro Lys Gly Ile Phe Cys Asn Pro Tyr Asn Asn  
 465 470 475 480  
 Leu Ile Phe Ile Trp Gly Asn Phe Leu Leu Gln Arg Ser Gly Thr Ser  
 485 490 495  
 Trp Arg Ala Ala Thr Gly Ser Thr Ser Cys Ser Leu Pro Arg Ala Gly  
 500 505 510  
 Arg Cys Thr Ser Ala  
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&lt;210&gt; 4443

&lt;211&gt; 692

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4443

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 180  
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 240  
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 480  
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692

<210> 4444

<211> 108

<212> PRT

<213> Homo sapiens

<400> 4444

Met	Ser	Val	Cys	Leu	Leu	Val	Gly	Leu	Thr	Asn	Ser	Ser	Thr	Trp	Ser
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Leu	Met	Pro	Asn	Gln	Val	Gln	Thr	Thr	Leu	Leu	Phe	Cys	Val	Thr	Leu
			20				25					30			
Cys	Glu	Ala	Ser	Cys	Lys	Leu	Asp	Ser	Leu	Pro	Ser	Ala	Pro	Ser	Pro
	35					40					45				
Lys	Ala	Gly	Leu	Gln	Glu	Val	Arg	Pro	Ala	Leu	Gln	Ala	Thr	Pro	Val
	50				55					60					
Leu	Gly	Leu	Leu	Leu	Ser	Ser	Phe	Leu	Arg	Val	Thr	Glu	Pro	Gly	
65				70				75						80	
Arg	Glu	Val	Gly	Cys	Gly	Leu	Pro	Cys	Pro	Tyr	Ser	His	Leu	Leu	Gln
			85				90						95		
Leu	Pro	Pro	Cys	Trp	Thr	His	Gln	Gln	Gln	Ser	Lys				
			100				105								

<210> 4445

<211> 901

<212> DNA

<213> Homo sapiens

<400> 4445

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120  
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180  
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240  
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300  
gatgatactc aggtacacgg gtgctcaaca gattgcttcc tcctatcctc agacggtcct  
360  
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420  
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480  
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540  
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660  
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720

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 a  
 901

<210> 4446  
 <211> 140  
 <212> PRT  
 <213> Homo sapiens

<400> 4446  
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 20 25 30  
 Pro Gln Glu Cys Pro Asp Pro His Ser Tyr Pro Gly Pro Arg Ser Pro  
 35 40 45  
 Thr Pro Gly Leu Pro Ser Ser Ala Val Asn Asp Asp Leu Leu Leu Leu  
 50 55 60  
 Pro Ser Ser Leu Pro Ser Val Thr Lys Gly Leu Pro Arg Cys Gln Leu  
 65 70 75 80  
 Trp Asn Glu Gly Cys Pro Trp Glu Val Met Ile Leu Arg Tyr Thr Gly  
 85 90 95  
 Ala Gln Gln Ile Ala Ser Ser Tyr Pro Gln Thr Val Phe Ala Cys Met  
 100 105 110  
 Gln Pro Leu Ala Leu Pro Leu Cys Gly Arg Lys Pro Ala Gln Gly His  
 115 120 125  
 Thr Ala Gly Gln Gln Gln His Ser Trp Ser Gln Ile  
 130 135 140

<210> 4447  
 <211> 951  
 <212> DNA  
 <213> Homo sapiens

<400> 4447  
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 240  
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 300  
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 360  
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 420

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 720  
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<210> 4448

<211> 263

<212> PRT

<213> Homo sapiens

<400> 4448

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			20					25					30		
Asp	Arg	Gly	Pro	Trp	Arg	Val	Gly	Val	Val	Gly	Tyr	Gly	Arg	Leu	Gly
			35				40						45		
Gln	Ser	Leu	Val	Ser	Arg	Leu	Leu	Ala	Gln	Gly	Ser	Glu	Leu	Gly	Leu
			50				55					60			
Glu	Leu	Val	Phe	Val	Trp	Asn	Arg	Asp	Pro	Gly	Arg	Met	Ala	Gly	Ser
65					70					75				80	
Val	Pro	Pro	Ala	Leu	Gln	Leu	Glu	Asp	Leu	Thr	Thr	Leu	Glu	Glu	Arg
				85					90					95	
His	Pro	Asp	Leu	Val	Val	Glu	Val	Ala	His	Pro	Lys	Ile	Ile	His	Glu
			100					105					110		
Ser	Gly	Val	Gln	Ile	Leu	Arg	His	Ala	Asn	Leu	Leu	Ser	Leu	Arg	Val
		115					120					125			
Thr	Met	Ala	Thr	His	Pro	Asp	Gly	Phe	Arg	Leu	Glu	Gly	Pro	Leu	Ala
		130					135					140			
Ala	Ala	His	Ser	Pro	Gly	Pro	Cys	Thr	Val	Leu	Tyr	Glu	Gly	Pro	Val
145					150					155				160	
Arg	Gly	Leu	Cys	Pro	Phe	Ala	Pro	Arg	Asn	Ser	Asn	Thr	Met	Ala	Ala
			165					170						175	
Ala	Ala	Leu	Ala	Ala	Pro	Ser	Leu	Gly	Phe	Asp	Gly	Val	Ile	Gly	Val
		180						185					190		
Leu	Val	Ala	Asp	Thr	Ser	Leu	Thr	Asp	Met	His	Val	Val	Asp	Val	Glu
		195					200						205		
Leu	Ser	Gly	Pro	Arg	Gly	Pro	Thr	Gly	Arg	Ser	Phe	Ala	Val	His	Thr
		210					215					220			
Arg	Arg	Glu	Asn	Pro	Ala	Glu	Pro	Gly	Ala	Val	Thr	Gly	Ser	Ala	Thr

225		230		235		240									
Val	Thr	Ala	Phe	Trp	Arg	Ser	Leu	Leu	Ala	Cys	Cys	Gln	Leu	Pro	Ser
			245					250						255	
Arg	Pro	Gly	Ile	His	Leu	Cys									
			260												

&lt;210&gt; 4449

&lt;211&gt; 1365

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4449

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120
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300
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360
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420
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1020
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1080
gacaaccagt ttaatgaaga atcttttagaa cacgatgttc ttgatgataa tacagagcag
1140
acagatgaca aaataccagc tacagaacag acaaaccaag tgattgaaaa agcatctgac
1200
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1260

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aactccacag ttccctggagc tgattctatt cctgatcctg aactaagtgg agaattcttg  
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<210> 4450  
 <211> 194  
 <212> PRT  
 <213> Homo sapiens

<400> 4450  
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 Gly Pro Gln Asn Arg Tyr Ala Leu Ile Cys Gln Gln Cys Phe Ser His  
 35 40 45  
 Asn Gly Met Ala Leu Lys Glu Glu Phe Glu Tyr Ile Ala Phe Arg Cys  
 50 55 60  
 Ala Tyr Cys Phe Phe Leu Asn Pro Ala Arg Lys Thr Arg Pro Gln Ala  
 65 70 75 80  
 Pro Arg Leu Pro Glu Phe Ser Phe Glu Lys Arg Gln Val Val Glu Gly  
 85 90 95  
 Ser Ser Ser Val Gly Pro Leu Pro Ser Gly Ser Val Leu Ser Ser Asp  
 100 105 110  
 Asn Gln Phe Asn Glu Glu Ser Leu Glu His Asp Val Leu Asp Asp Asn  
 115 120 125  
 Thr Glu Gln Thr Asp Asp Lys Ile Pro Ala Thr Glu Gln Thr Asn Gln  
 130 135 140  
 Val Ile Glu Lys Ala Ser Asp Ser Glu Glu Pro Glu Glu Lys Gln Glu  
 145 150 155 160  
 Thr Glu Asn Glu Glu Ala Ser Val Ile Glu Thr Asn Ser Thr Val Pro  
 165 170 175  
 Gly Ala Asp Ser Ile Pro Asp Pro Glu Leu Ser Gly Glu Ser Leu Thr  
 180 185 190  
 Ala Glu

<210> 4451  
 <211> 1637  
 <212> DNA  
 <213> Homo sapiens

<400> 4451  
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1440  
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1500  
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1560  
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1620  
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1637

&lt;210&gt; 4452

&lt;211&gt; 328

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4452

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Arg Ala Val Pro Thr Leu Thr Ala Thr Xaa Ser Leu Ala Asp Leu Leu
      20           25           30
Lys Tyr Asn Phe Tyr Leu Pro Phe Phe Phe Gly Pro Ile Met Thr
      35           40           45
Phe Asp Arg Phe His Ala Gln Val Ser Gln Val Glu Pro Val Arg Arg
      50           55           60
Glu Gly Glu Leu Trp His Ile Arg Ala Gln Ala Gly Leu Ser Val Val
      65           70           75           80
Ala Ile Met Ala Val Asp Ile Phe Phe His Phe Phe Tyr Ile Leu Thr
      85           90           95
Ile Pro Ser Asp Leu Lys Phe Ala Asn Arg Leu Pro Asp Ser Ala Leu
      100          105          110
Ala Gly Leu Ala Tyr Ser Asn Leu Val Tyr Asp Trp Val Lys Ala Ala
      115          120          125
Val Leu Phe Gly Val Val Asn Thr Val Ala Cys Leu Asp His Leu Asp
      130          135          140
Pro Pro Gln Pro Pro Lys Cys Ile Thr Ala Leu Tyr Val Phe Ala Glu
      145          150          155          160
Thr His Phe Asp Arg Gly Ile Asn Asp Trp Leu Cys Lys Tyr Val Tyr
      165          170          175
Asn His Ile Gly Gly Glu His Ser Ala Val Ile Pro Glu Leu Ala Ala
      180          185          190
Thr Val Ala Thr Phe Ala Ile Thr Thr Leu Trp Leu Gly Pro Cys Asp
      195          200          205
Ile Val Tyr Leu Trp Ser Phe Leu Asn Cys Phe Gly Leu Asn Phe Glu
      210          215          220
Leu Trp Met Gln Lys Leu Ala Glu Trp Gly Pro Leu Ala Arg Ile Glu
      225          230          235          240
Ala Ser Leu Ser Val Gln Met Ser Arg Arg Val Arg Ala Leu Phe Gly
      245          250          255
Ala Met Asn Phe Trp Ala Ile Ile Met Tyr Asn Leu Val Ser Leu Asn
      260          265          270
Ser Leu Lys Phe Thr Glu Leu Val Ala Arg Arg Leu Leu Leu Thr Gly
      275          280          285
Phe Pro Gln Thr Thr Leu Ser Ile Leu Phe Val Thr Tyr Cys Gly Val
      290          295          300
Gln Leu Val Lys Glu Arg Glu Arg Thr Leu Ala Leu Glu Glu Glu Gln
      305          310          315          320
Lys Gln Asp Lys Glu Lys Pro Glu
      325

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&lt;210&gt; 4453

&lt;211&gt; 685

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4453

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180

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 300  
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 685

&lt;210&gt; 4454

&lt;211&gt; 207

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4454

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Pro	Gly	Trp	His	Ile	Tyr	Thr	His	Ser	Gly	Ser	Glu	Arg	Leu	Val	Asn
			20					25					30		
Gln	Lys	Trp	Ala	Ala	Gly	Ala	Lys	Ala	Tyr	Leu	Asn	Lys	Gly	Ser	Lys
		35					40					45			
Gly	Pro	Leu	Ser	Leu	Gly	Ser	Ser	Ile	Gln	Pro	Leu	Ser	Gln	Gln	Arg
	50					55					60				
Gln	Asp	Cys	Gly	Pro	Leu	Cys	Phe	Leu	Asn	Arg	Ala	Gln	Gly	Ser	Gln
65					70					75					80
Gly	Met	Pro	Ser	Leu	Gln	His	Ser	Thr	Leu	Trp	Ser	Gln	Trp	Ser	Arg
				85					90					95	
Arg	Ser	Ser	Leu	Lys	Tyr	Tyr	Tyr	Arg	Gly	Glu	Arg	Pro	Ile	Leu	Ala
			100					105					110		
Met	Leu	Leu	Tyr	Leu	Pro	Arg	Pro	Lys	Thr	Val	Leu	Cys	Ser	Phe	Ser
	115						120					125			
Cys	Ser	Glu	Ile	Arg	Ser	Gln	Asn	Ser	Arg	Arg	His	Ser	Phe	Gly	Lys
	130					135					140				
Lys	Gly	His	Ala	Phe	Val	Leu	Tyr	Leu	Ile	Leu	Val	Ser	Glu	Ala	Leu
145					150					155					160
Ile	Pro	Val	Asp	Cys	Gly	Leu	Arg	Trp	Ser	Pro	Pro	Gln	Asp	Pro	Gln
			165					170					175		
Leu	Gln	Arg	Gln	Arg	Arg	Met	Lys	Glu	Glu	Gln	Pro	Pro	Gln	Asp	Leu
		180					185						190		
Leu	His	Trp	Glu	Pro	His	Pro	Thr	Phe	Ser	Val	Pro	Phe	Thr	Arg	
	195						200						205		

&lt;210&gt; 4455

&lt;211&gt; 882



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4455

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 60  
 ggattaagcc acagcccggg gaaccctcgc accattccca tgaaggacca cgatgccatc  
 120  
 aagctgttca ttgggcagat ccccgcaac ctggatgaga aggacctcaa gccctcttcc  
 180  
 gaggagtttg gcaaaatcta cgagcttacg gttctgaagg acaggttcac aggcattcac  
 240  
 aaaggctcgc cttctctcac ctactgcgag cgtgagtcag cgctgaaggc ccagagcgcg  
 300  
 ctgcacgagc agaagactct gcccgggatg aaccggccga tccagggtgaa gcctgcggac  
 360  
 agcgagagcc gaggagatag tagctgcctg cgccagcccc cttcacatag aaaactcttc  
 420  
 gtgggcatgc tcaacaagca acagtccgag gacgacgtgc gccgcctttt cgaggccttt  
 480  
 gggaacatcg aggagtgcac catcctgcgc gggcccgacg gcaacagcaa ggggtgcgcc  
 540  
 tttgtgaagt actcctccca cgccgaggcg caggccgcca tcaacgcgct acacggcagc  
 600  
 cagaccatgc cgggagcctc gtccagtctg gtggtcaagt tcgccgacac cgacaaggag  
 660  
 cgcacgatgc ggcgaatgca gcagatggct ggccagatgg gcatgttcaa ccccatggcc  
 720  
 atcccttttcg gggcctacgg cgccctacgt caggcactga tgcagcagca agcggcctcg  
 780  
 atggcatcag tcgcgcaggg cggctacctg aaccccatgg ctgccttcgc tgccgcccag  
 840  
 atgcagcaga tggcggccct caacatgaat ggcctggcgg cc  
 882

&lt;210&gt; 4456

&lt;211&gt; 261

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4456

Met	Lys	Asp	His	Asp	Ala	Ile	Lys	Leu	Phe	Ile	Gly	Gln	Ile	Pro	Arg
1				5					10					15	
Asn	Leu	Asp	Glu	Lys	Asp	Leu	Lys	Pro	Leu	Phe	Glu	Glu	Phe	Gly	Lys
			20					25					30		
Ile	Tyr	Glu	Leu	Thr	Val	Leu	Lys	Asp	Arg	Phe	Thr	Gly	Met	His	Lys
			35				40					45			
Gly	Cys	Ala	Phe	Leu	Thr	Tyr	Cys	Glu	Arg	Glu	Ser	Ala	Leu	Lys	Ala
			50				55				60				
Gln	Ser	Ala	Leu	His	Glu	Gln	Lys	Thr	Leu	Pro	Gly	Met	Asn	Arg	Pro
					70					75				80	
Ile	Gln	Val	Lys	Pro	Ala	Asp	Ser	Glu	Ser	Arg	Gly	Asp	Ser	Ser	Cys
				85					90				95		
Leu	Arg	Gln	Pro	Pro	Ser	His	Arg	Lys	Leu	Phe	Val	Gly	Met	Leu	Asn

```

      100      105      110
Lys Gln Gln Ser Glu Asp Asp Val Arg Arg Leu Phe Glu Ala Phe Gly
      115      120      125
Asn Ile Glu Glu Cys Thr Ile Leu Arg Gly Pro Asp Gly Asn Ser Lys
      130      135      140
Gly Cys Ala Phe Val Lys Tyr Ser Ser His Ala Glu Ala Gln Ala Ala
      145      150      155      160
Ile Asn Ala Leu His Gly Ser Gln Thr Met Pro Gly Ala Ser Ser Ser
      165      170      175
Leu Val Val Lys Phe Ala Asp Thr Asp Lys Glu Arg Thr Met Arg Arg
      180      185      190
Met Gln Gln Met Ala Gly Gln Met Gly Met Phe Asn Pro Met Ala Ile
      195      200      205
Pro Phe Gly Ala Tyr Gly Ala Tyr Ala Gln Ala Leu Met Gln Gln Gln
      210      215      220
Ala Ala Leu Met Ala Ser Val Ala Gln Gly Gly Tyr Leu Asn Pro Met
      225      230      235      240
Ala Ala Phe Ala Ala Ala Gln Met Gln Gln Met Ala Ala Leu Asn Met
      245      250      255
Asn Gly Leu Ala Ala
      260

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&lt;210&gt; 4457

&lt;211&gt; 1491

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4457

```

nggctggcag gtgcacatca gcttaaagct gatgcaacag tcctctctct acgcatccaa
60
tgagaccatg ctgaccctct tctacgaaga cagcaaactg taccagggtgc ccggtggagc
120
tatgcgggga catcggggca cccaggagg gctgacccca gtcacactgg ccctgccttc
180
cccctgcagc tgggtgtacct tatgaacaac cagaagggcc agctgggtcaa gaggctcgtg
240
cccgtggagc agcttctgat gtatcaacag cacaccagcc actatgactt ggagcggaaa
300
gggggctact tgatgctctc cttcatcgac ttctgcccct tctcgggtgat gcgcctgcgg
360
agcctgccca gtccgcagag atacacgcgc caggagcgct accggggcgc gccgccgcgc
420
gtcctggagc gctcgggctt ccacaacgag aactcgctcg ccatctacca gggcctggtc
480
tactacctgc tgtggctgca ctccgtgtac gacaaggatt actacttctt cttggcgagc
540
aattggcgaa gcgcggggcgc cgtgtccata gaaatggaca gctacgaaaa gatctacaac
600
ctcgagtcgc cgtacgagct gccggagcgc attttcctgg acaagggcac tgagtacagc
660
ttcgccatct tcctgtcggc gcagggccac tcgttcgga cgcagtcaga actcggctctg
720
cgcgggacca gagtggagcc cgaagggcgc gccgagggct accagaatct gggagcctgg
780

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ggggcgggga caccatcgga ggggcggggc ctgtctgtgg acgtgggcgt ggtgctggcc  
 840  
 gaccccgget gcatcgaggc ctcggtgaag caggaggtcc tgattaatcg caactcgggtg  
 900  
 ctattttcga ttacgctcaa ggataaaaag ctttgctatg accaaggcat tagtggacat  
 960  
 caccttatgg agacttccat gacggtcaat gtgaggtcca agcctggagg ggagggaag  
 1020  
 cgcctggcct tcgacatcac ctacacgctg gaatacagcc gcctgaagaa caaacactac  
 1080  
 tttgactgcg ttaacgtgaa cccggagatg ccctgcttct tcttcggga cagtgtctat  
 1140  
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 1200  
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 1260  
 accacaagga ccaccaaaga ctcagccttt cacatcatgt cccacgagag cccaggcatc  
 1320  
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 1380  
 cctgaattct tcttcaaggt gttggtgagc aataggtgag ccaggcaagt ggcccggtg  
 1440  
 cgggtcaggg gctgcccctg gaatgcctgg cttctcctct aatcctggat c  
 1491

&lt;210&gt; 4458

&lt;211&gt; 405

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4458

Met	Asn	Asn	Gln	Lys	Gly	Gln	Leu	Val	Lys	Arg	Leu	Val	Pro	Val	Glu
1			5					10					15		
Gln	Leu	Leu	Met	Tyr	Gln	Gln	His	Thr	Ser	His	Tyr	Asp	Leu	Glu	Arg
			20					25					30		
Lys	Gly	Gly	Tyr	Leu	Met	Leu	Ser	Phe	Ile	Asp	Phe	Cys	Pro	Phe	Ser
			35				40					45			
Val	Met	Arg	Leu	Arg	Ser	Leu	Pro	Ser	Pro	Gln	Arg	Tyr	Thr	Arg	Gln
			50				55				60				
Glu	Arg	Tyr	Arg	Ala	Arg	Pro	Pro	Arg	Val	Leu	Glu	Arg	Ser	Gly	Phe
65					70					75					80
His	Asn	Glu	Asn	Ser	Leu	Ala	Ile	Tyr	Gln	Gly	Leu	Val	Tyr	Tyr	Leu
					85				90					95	
Leu	Trp	Leu	His	Ser	Val	Tyr	Asp	Lys	Asp	Tyr	Tyr	Phe	Phe	Leu	Ala
			100					105					110		
Ser	Asn	Trp	Arg	Ser	Ala	Gly	Gly	Val	Ser	Ile	Glu	Met	Asp	Ser	Tyr
			115				120				125				
Glu	Lys	Ile	Tyr	Asn	Leu	Glu	Ser	Ala	Tyr	Glu	Leu	Pro	Glu	Arg	Ile
			130				135				140				
Phe	Leu	Asp	Lys	Gly	Thr	Glu	Tyr	Ser	Phe	Ala	Ile	Phe	Leu	Ser	Ala
145					150					155					160
Gln	Gly	His	Ser	Phe	Arg	Thr	Gln	Ser	Glu	Leu	Gly	Leu	Arg	Gly	Thr
					165				170				175		
Arg	Val	Glu	Pro	Glu	Gly	Arg	Gly	Glu	Gly	Tyr	Gln	Asn	Leu	Gly	Ala

```
<210> 4459
<211> 1114
<212> DNA
<213> Homo sapiens
```

```

<400> 4459
cgggggccacg ctgttccaca ggcacgctga gcggtctgaa gaccttccc agtccagag
60
aaggcaacac cgagggagggc ccagcaccac agtccatggc agacacatgg ttcagacttg
120
gccgattgat ctaagaaact ttattgctca gaaccttccc tccttgggca atggaaagag
180
ctttggagac cagcccatgg ggacagagtc agaggcactg ggtgtaaaaa aagagcgagc
240
gtgtggcaca tttggtccat tgtcatgtgt gggatatggca ggaggagggg gtaatctaga
300
agccccacat ctagggcctt ctagggaccc agatatgcc ccttaggcaa ggctcacatg
360
ccaaagcaaa gcagatgagg tcagcctggc ttgggttgag ggctcagtc ctcttagcct
420
tgccctgggg ttcttggacc ttccggaaac tgagccacat caggctcacg ttgatagcat
480
aggtggtgat acaacaatg cagaaatcat agagcacgaa gaacaggatc caggccagggt
540

```

agacagaacc agcgagagac accagggagc tcagcagcat caggacagag gcccagcgtg  
 600  
 tccgcaggca acctaacaat agctgtagtg tgtagaagat gcaaccgaat atgctgttgg  
 660  
 attgattgag gatgctgtcc tgtcccagca catgctccac cagcccgaac cccctgcccc  
 720  
 acctggagga gaagacgcgc gaacagctga tggcggtgccc cagtcgcag agcgcgcggt  
 780  
 aatcccggtc cggggcgcgc gccgccttca cgtgcagcgc gtagagcgag agcactaagc  
 840  
 ccgtcaggca aagagcgagc cgcaccagc cagggtcccc ccaggtgctg cccattatct  
 900  
 ccaggttccg cccgagggcgc ccgcggagaa aaccagccac ggagcagggg ccgggcggcg  
 960  
 aatggccgcg cccctcctgg cctctgact cggcgattgg ccggccgtgc tcgcactcca  
 1020  
 cgacccaaat ggctgttcca gggcgctagt caagcggcg agttaggaaa acagcgaaga  
 1080  
 atgccgggac tagtgaagcg ggtaaggac gtgc  
 1114

&lt;210&gt; 4460

&lt;211&gt; 121

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4460

Trp	Arg	Cys	Pro	Arg	Arg	Arg	Ala	Arg	Gly	Asn	Pro	Gly	Pro	Gly	Arg
1				5					10					15	
Ala	Pro	Pro	Ser	Arg	Ala	Ala	Arg	Arg	Ala	Arg	Ala	Leu	Ser	Pro	Ser
			20					25					30		
Gly	Lys	Glu	Arg	Ala	Ala	Pro	Ser	Gln	Gly	Ser	Pro	Arg	Cys	Cys	Pro
	35						40					45			
Leu	Ser	Pro	Gly	Ser	Ala	Arg	Gly	Ala	Arg	Gly	Glu	Asn	Gln	Pro	Arg
	50					55					60				
Ser	Arg	Gly	Arg	Ala	Ala	Asn	Gly	Arg	Ala	Pro	Pro	Gly	Pro	Leu	Thr
65					70				75					80	
Arg	Arg	Leu	Ala	Gly	Arg	Ala	Arg	Thr	Pro	Arg	Pro	Lys	Trp	Leu	Phe
			85					90					95		
Gln	Gly	Ala	Ser	Gln	Ala	Gly	Glu	Leu	Gly	Lys	Gln	Arg	Arg	Met	Pro
		100						105					110		
Gly	Leu	Val	Lys	Arg	Val	Arg	Asp	Val							
		115					120								

&lt;210&gt; 4461

&lt;211&gt; 488

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4461

acagagtcct acaccagcac tgcaatggcc cccaagggca tcttctgtaa cccgtacaac  
 60  
 aatctgatct tcattctggg caacttcctc ctgcagagct ctaacaagga aaacttcac  
 120

tacctggcag acttcccca ggaactgtcc atcaaataca tggccagatc gttccgtggg  
 180  
 gctgtggcta ttgtcacaga gacggaggag gtgggctgcc ccgcccttct cccattccc  
 240  
 tctctgcccc cccccaaacc ccaggggccc ctctttcccc cgtcacagta aaggagccaa  
 300  
 ggggaaggggg caccctcggg gaccctgaga aagggcagtg aagctccatt tataactgaa  
 360  
 actcctggaa ctcagggtaa gtgtcagctc caaagtcacg cagaccggag ctatgatccg  
 420  
 atgttcagag gcggccctct ttcattccac agtgtggtcg ttcacttcat aaatattgag  
 480  
 catttaaa  
 488

&lt;210&gt; 4462

&lt;211&gt; 96

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4462

Thr	Glu	Ser	Tyr	Thr	Ser	Thr	Ala	Met	Ala	Pro	Lys	Gly	Ile	Phe	Cys
1				5					10					15	
Asn	Pro	Tyr	Asn	Asn	Leu	Ile	Phe	Ile	Trp	Gly	Asn	Phe	Leu	Leu	Gln
			20					25					30		
Ser	Ser	Asn	Lys	Glu	Asn	Phe	Ile	Tyr	Leu	Ala	Asp	Phe	Pro	Lys	Glu
		35					40					45			
Leu	Ser	Ile	Lys	Tyr	Met	Ala	Arg	Ser	Phe	Arg	Gly	Ala	Val	Ala	Ile
	50					55					60				
Val	Thr	Glu	Thr	Glu	Glu	Val	Gly	Cys	Pro	Ala	Leu	Leu	Pro	Ile	Pro
65					70					75				80	
Ser	Leu	Pro	Thr	Pro	Lys	Pro	Gln	Gly	Pro	Leu	Phe	Pro	Pro	Ser	Gln
				85					90					95	

&lt;210&gt; 4463

&lt;211&gt; 2662

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4463

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 60  
 ctgcgttaat tttaaataaa aagtcgagga cacggcggtc gttttcccgga agacatgggc  
 120  
 cctcccatgg gccatttgct ccctggaggc cctcgcgtct tgctgagccc ggggagttag  
 180  
 gatgacgcga gcggtgaggg aaccggaac aattccttca cagaacaatt gaggcgagggc  
 240  
 ctttgggagt actttgtggg acggaccctg gcggggcctg ccagacgcac agggatggcg  
 300  
 gcggaggcgg ccgatttggg gctgggggcc gccgtccccg tggagctgag gcgggagcga  
 360  
 cgcgtggtgt gcgtggagta cccgggagtg gtgcgtgatg tggctaagat gctgccgact  
 420

ctgggcggtg aggaaggcgt ctcccgatc tacgcagacc ccaccaagag gctggagctg  
480  
tacttccggc ccaaggaccc atactgccac ccagtgtgag ccaaccgctt cagtaccagc  
540  
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660  
tttcagggga tgtctgactt ccagtacttg gctgtgcata cggaagcagg cggcaagcat  
720  
acgtcaatgt atgacaaggt gctcatgctc cgccccgaga aggaggcctt tttccaccag  
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1620  
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1680  
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1920  
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1980  
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2040

ctctggctct gaggggtag ggacatcccc aaaggtata ccctggctct gccacccatg  
 2100  
 aaccagccca gcatccagcc agtgagtggg cacccaatgc ctctcaggat gagaccagta  
 2160  
 aatgccggag gtggagctgg gcagctgtgg agccccaggc cacaggccag tctcgcttgg  
 2220  
 ctctcatgac tgtggtggtg gagatagcgt ggggagcctc gcccatgggc tcacgtggca  
 2280  
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 2340  
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 2460  
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 2520  
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 2580  
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 2640  
 gggtgccag tgtgaaacta gt  
 2662

&lt;210&gt; 4464

&lt;211&gt; 519

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4464

Met	Ala	Ala	Glu	Ala	Ala	Asp	Leu	Gly	Leu	Gly	Ala	Ala	Val	Pro	Val
1			5					10					15		
Glu	Leu	Arg	Arg	Glu	Arg	Arg	Met	Val	Cys	Val	Glu	Tyr	Pro	Gly	Val
			20					25					30		
Val	Arg	Asp	Val	Ala	Lys	Met	Leu	Pro	Thr	Leu	Gly	Gly	Glu	Glu	Gly
			35				40					45			
Val	Ser	Arg	Ile	Tyr	Ala	Asp	Pro	Thr	Lys	Arg	Leu	Glu	Leu	Tyr	Phe
			50			55				60					
Arg	Pro	Lys	Asp	Pro	Tyr	Cys	His	Pro	Val	Cys	Ala	Asn	Arg	Phe	Ser
65					70					75				80	
Thr	Ser	Ser	Leu	Leu	Leu	Arg	Ile	Arg	Lys	Arg	Thr	Arg	Arg	Gln	Lys
			85						90					95	
Gly	Val	Leu	Gly	Thr	Glu	Ala	His	Ser	Glu	Val	Thr	Phe	Asp	Met	Glu
			100					105					110		
Ile	Leu	Gly	Ile	Ile	Ser	Thr	Ile	Tyr	Lys	Phe	Gln	Gly	Met	Ser	Asp
			115					120				125			
Phe	Gln	Tyr	Leu	Ala	Val	His	Thr	Glu	Ala	Gly	Gly	Lys	His	Thr	Ser
			130			135					140				
Met	Tyr	Asp	Lys	Val	Leu	Met	Leu	Arg	Pro	Glu	Lys	Glu	Ala	Phe	Phe
145					150					155				160	
His	Gln	Glu	Leu	Pro	Leu	Tyr	Ile	Pro	Pro	Pro	Ile	Phe	Ser	Arg	Leu
				165					170					175	
Asp	Ala	Pro	Val	Asp	Tyr	Phe	Tyr	Arg	Pro	Glu	Thr	Gln	His	Arg	Glu
			180					185					190		
Gly	Tyr	Asn	Asn	Pro	Pro	Ile	Ser	Gly	Glu	Asn	Leu	Ile	Gly	Leu	Ser



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      195              200              205
Arg Ala Arg Arg Pro His Asn Ala Ile Phe Val Asn Phe Glu Asp Glu
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Glu Val Pro Lys Gln Pro Leu Glu Ala Ala Ala Gln Thr Trp Arg Arg
  225              230              235              240
Val Cys Thr Asn Pro Val Asp Arg Lys Val Glu Glu Glu Leu Arg Lys
      245              250              255
Leu Phe Asp Ile Arg Pro Ile Trp Ser Arg Asn Ala Val Lys Ala Asn
      260              265              270
Ile Ser Val His Pro Asp Lys Leu Lys Val Leu Leu Pro Phe Ile Ala
      275              280              285
Tyr Tyr Met Ile Thr Gly Pro Trp Arg Ser Leu Trp Ile Arg Phe Gly
      290              295              300
Tyr Asp Pro Arg Lys Asn Pro Asp Ala Lys Ile Tyr Gln Val Leu Asp
  305              310              315              320
Phe Arg Ile Arg Cys Gly Met Lys His Gly Tyr Ala Pro Ser Asp Leu
      325              330              335
Pro Val Lys Ala Lys Arg Ser Thr Tyr Asn Tyr Ser Leu Pro Ile Thr
      340              345              350
Val Lys Lys Thr Ser Ser Gln Leu Val Thr Met His Asp Leu Lys Gln
      355              360              365
Gly Leu Gly Arg Ser Gly Thr Ser Gly Ala Arg Lys Pro Ala Ser Ser
      370              375              380
Lys Tyr Lys Leu Lys Asp Ser Val Tyr Ile Phe Arg Glu Gly Ala Leu
  385              390              395              400
Pro Pro Tyr Arg Gln Met Phe Tyr Gln Leu Cys Asp Leu Asn Val Glu
      405              410              415
Glu Leu Gln Lys Ile Ile His Arg Asn Asp Gly Ala Glu Asn Ser Cys
      420              425              430
Thr Glu Arg Asp Gly Trp Cys Leu Pro Lys Thr Ser Asp Glu Leu Arg
      435              440              445
Asp Thr Met Ser Leu Met Ile Arg Gln Thr Ile Arg Ser Lys Arg Pro
      450              455              460
Ala Leu Phe Ser Ser Ser Ala Lys Ala Asp Gly Gly Lys Glu Gln Leu
  465              470              475              480
Thr Tyr Glu Ser Gly Glu Asp Glu Glu Asp Glu Glu Glu Glu Glu
      485              490              495
Glu Glu Glu Asp Phe Lys Pro Ser Asp Gly Ser Glu Asn Glu Met Glu
      500              505              510
Thr Glu Ile Leu Asp Tyr Val
      515

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&lt;210&gt; 4465

&lt;211&gt; 1291

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4465

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180

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 1200  
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<210> 4466

<211> 93

<212> PRT

<213> Homo sapiens

<400> 4466

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Leu	Arg	Gln	Met	Val	Gly	Glu	Arg	Tyr	Arg	Asp	Leu	Ile	Glu	Ala	Xaa
			20						25				30		
Asp	Thr	Ile	Gly	Gln	Met	Arg	Arg	Xaa	Ala	Val	Gly	Leu	Val	Asp	Ala
		35					40					45			
Val	Lys	Ala	Thr	Asp	Gln	Tyr	Cys	Ala	Arg	Leu	Arg	Gln	Ala	Gly	Ser
	50					55					60				
Ala	Ala	Pro	Arg	Pro	Pro	Arg	Ala	Gln	Gln	Pro	Gln	Gln	Pro	Ser	Gln

65		70		75		80
Glu	Lys	Phe	Tyr	Ser	Met	Ala
				Ala	Arg	Ser
				Ser	Ser	Tyr
				Ser		Ser
		85		90		

<210> 4467  
 <211> 1142  
 <212> DNA  
 <213> Homo sapiens

<400> 4467  
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 gt  
 1142

<210> 4468  
 <211> 170  
 <212> PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4468

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 1 5 10 15  
 Lys Glu His Leu Ser Gln Leu Glu Ser Pro Val Val Phe Cys His Asn  
 20 25 30  
 Asp Leu Leu Cys Lys Asn Ile Ile Tyr Asp Ser Ile Lys Gly His Val  
 35 40 45  
 Arg Phe Ile Asp Tyr Glu Tyr Ala Gly Tyr Asn Tyr Gln Ala Phe Asp  
 50 55 60  
 Ile Gly Asn His Phe Asn Glu Phe Ala Gly Val Asn Glu Val Asp Tyr  
 65 70 75 80  
 Cys Leu Tyr Pro Ala Arg Glu Thr Gln Leu Gln Trp Leu His Tyr Tyr  
 85 90 95  
 Leu Gln Ala Gln Lys Gly Met Ala Val Thr Pro Arg Glu Val Gln Arg  
 100 105 110  
 Leu Tyr Val Gln Val Asn Lys Phe Ala Leu Ala Ser His Phe Phe Trp  
 115 120 125  
 Ala Leu Trp Ala Leu Ile Gln Asn Gln Tyr Ser Thr Ile Asp Phe Asp  
 130 135 140  
 Phe Leu Arg Tyr Ala Val Ile Arg Phe Asn Gln Tyr Phe Lys Val Lys  
 145 150 155 160  
 Pro Gln Ala Ser Ala Leu Glu Met Pro Lys  
 165 170

&lt;210&gt; 4469

&lt;211&gt; 409

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4469

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 ctgaacggtg cattctgtcc tgatgacact cactttgttt ccagatccca gtgttggtca  
 120  
 ggcctgggat ggccaagaca gttggaaagc aggagatgga caacttgaag gcattgcaca  
 180  
 gtgctttaga ggcctcctgc gageccttgggt tttgaagctt taacaggcct ccctcccatc  
 240  
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 360  
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 409

&lt;210&gt; 4470

&lt;211&gt; 55

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4470

Ile Tyr Asp Ala Gln His Ala Asn Leu Ala Gly Thr Leu Ser Gly His

1	5	10	15
Ala Ser Trp Val Leu Asn Val Ala Phe Cys Pro Asp Asp Thr His Phe			
20	25	30	
Val Ser Arg Ser Gln Cys Trp Ser Gly Leu Gly Trp Pro Arg Gln Leu			
35	40	45	
Glu Ser Arg Arg Trp Thr Thr			
50	55		

&lt;210&gt; 4471

&lt;211&gt; 1771

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4471

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 180  
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 240  
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 1200

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 1680  
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 1771

&lt;210&gt; 4472

&lt;211&gt; 160

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4472

Met	Glu	Ile	Pro	Val	Pro	Val	Gln	Pro	Ser	Trp	Leu	Arg	Arg	Ala	Ser
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Ala	Pro	Leu	Pro	Gly	Leu	Ser	Ala	Pro	Gly	Arg	Leu	Phe	Asp	Gln	Arg
			20					25					30		
Phe	Gly	Glu	Gly	Leu	Leu	Glu	Ala	Glu	Leu	Ala	Ala	Leu	Cys	Pro	Thr
	35						40					45			
Thr	Leu	Ala	Pro	Tyr	Tyr	Leu	Arg	Ala	Pro	Ser	Val	Ala	Leu	Pro	Val
	50					55					60				
Ala	Gln	Val	Pro	Thr	Asp	Pro	Gly	His	Phe	Ser	Val	Leu	Leu	Asp	Val
	65				70					75				80	
Lys	His	Phe	Ser	Pro	Glu	Glu	Ile	Ala	Val	Lys	Val	Val	Gly	Glu	His
			85						90					95	
Val	Glu	Val	His	Ala	Arg	His	Glu	Glu	Arg	Pro	Asp	Glu	His	Gly	Phe
			100					105					110		
Val	Ala	Arg	Glu	Phe	His	Arg	Arg	Tyr	Arg	Leu	Pro	Pro	Gly	Val	Asp
	115						120					125			
Pro	Ala	Ala	Val	Thr	Ser	Ala	Leu	Ser	Pro	Glu	Gly	Val	Leu	Ser	Ile
	130					135					140				
Gln	Ala	Ala	Pro	Ala	Ser	Ala	Gln	Ala	Pro	Pro	Pro	Ala	Ala	Ala	Lys
	145				150					155					160

&lt;210&gt; 4473

&lt;211&gt; 1255

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4473

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<210> 4474

<211> 305

<212> PRT

<213> Homo sapiens

<400> 4474

Met	Thr	Asn	Gln	Tyr	Gly	Ile	Leu	Phe	Lys	Gln	Glu	Gln	Ala	His	Asp
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Asp	Ala	Ile	Trp	Ser	Val	Ala	Trp	Gly	Thr	Asn	Lys	Lys	Glu	Asn	Ser
		20						25					30		
Glu	Thr	Val	Val	Thr	Gly	Ser	Leu	Asp	Asp	Leu	Val	Lys	Val	Trp	Lys

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      35      40      45
Trp Arg Asp Glu Arg Leu Asp Leu Gln Trp Ser Leu Glu Gly His Gln
50      55      60
Leu Gly Val Val Ser Val Asp Ile Ser His Thr Leu Pro Ile Ala Ala
65      70      75      80
Ser Ser Ser Leu Asp Ala His Ile Arg Leu Trp Asp Leu Glu Asn Gly
85      90      95
Lys Gln Met Lys Ser Ile Asp Ala Gly Pro Val Asp Ala Trp Thr Leu
100      105      110
Ala Phe Ser Pro Asp Ser Gln His Leu Ala Thr Gly Thr His Met Gly
115      120      125
Lys Val Asn Ile Phe Gly Val Glu Ser Gly Lys Lys Glu Tyr Ser Leu
130      135      140
Asp Thr Arg Gly Lys Phe Ile Leu Ser Ile Ala Tyr Ser Pro Asp Gly
145      150      155      160
Lys Tyr Leu Ala Ser Gly Ala Ile Asp Gly Ile Ile Asn Ile Phe Asp
165      170      175
Ile Ala Thr Gly Lys Leu Leu His Thr Leu Glu Gly His Ala Met Pro
180      185      190
Ile Arg Ser Leu Thr Phe Ser Pro Asp Ser Gln Leu Leu Val Thr Ala
195      200      205
Ser Asp Asp Gly Tyr Ile Lys Ile Tyr Asp Val Gln His Ala Asn Leu
210      215      220
Ala Gly Thr Leu Ser Gly His Ala Ser Trp Val Leu Asn Val Ala Phe
225      230      235      240
Cys Pro Asp Asp Thr His Phe Val Ser Ser Ser Asp Lys Ser Val
245      250      255
Lys Val Trp Asp Val Gly Thr Arg Thr Cys Val His Thr Phe Phe Asp
260      265      270
His Gln Asp Gln Val Trp Gly Val Lys Tyr Asn Gly Asn Gly Ser Lys
275      280      285
Ile Val Ser Val Gly Asp Asp Gln Glu Ile His Ile Tyr Asp Cys Pro
290      295      300
Ile
305

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&lt;210&gt; 4475

&lt;211&gt; 475

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4475

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360

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<210> 4476

<211> 106

<212> PRT

<213> Homo sapiens

<400> 4476

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Gly	Leu	His	Pro	Gly	Gly	Gly	Leu	Arg	Ala	Ala	Gly	Arg	Gln	Gln	Met
			20				25						30		
Ser	Arg	Arg	Ser	Ser	Ser	Ser	Gln	Pro	Leu	Pro	Gln	Ser	Ala	Arg	Thr
		35					40					45			
Gly	His	Thr	Glu	Gly	Ser	Val	Ala	Leu	His	Gly	Ser	Pro	Ala	Ser	Arg
	50					55				60					
Gln	Thr	Ser	Gln	Arg	Trp	Thr	Val	Cys	Gln	Gly	Trp	Asp	Trp	Asn	Ser
65				70					75					80	
Arg	Arg	Ser	Leu	Asp	Thr	Ser	Gly	Ile	Arg	Glu	Thr	Ser	Leu	Gly	Arg
			85					90						95	
Tyr	Pro	Leu	Pro	Ser	Ser	Arg	Val	His	Ala						
			100				105								

<210> 4477

<211> 1153

<212> DNA

<213> Homo sapiens

<400> 4477

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 300  
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 360  
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 420  
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&lt;210&gt; 4478

&lt;211&gt; 118

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4478

Met	Trp	Lys	Arg	Gly	Glu	Val	Gly	Lys	Ile	Lys	Glu	Cys	Leu	Glu	Gly
1				5					10					15	
Lys	Thr	Glu	Tyr	Gln	Glu	Ser	Glu	Phe	Leu	Ser	Pro	Ala	Tyr	Ser	Asp
		20						25					30		
Lys	Pro	Leu	Gly	Leu	Cys	Glu	Asn	Ala	Asp	Val	Leu	Asp	Arg	Arg	Leu
		35						40					45		
Trp	Glu	Gly	Asn	Met	Lys	Glu	Glu	Asn	Asn	Asn	Glu	Ser	Lys	Ser	Thr
		50				55					60				
Ser	Ile	Pro	Gly	His	Phe	Ile	His	Phe	Gln	Asp	Tyr	Cys	Ala	Pro	Ile
65				70					75					80	
Ser	Thr	Leu	Met	Val	Cys	Val	Asp	Thr	Ala	Gln	Gly	Cys	Ile	Ser	Leu
				85					90					95	
Arg	Cys	His	Thr	Phe	Pro	Leu	Val	Ser	Ser	Asp	Ile	Met	Pro	Gln	Phe
				100				105						110	
Leu	Gln	Ser	His	Ile	Lys										
				115											

&lt;210&gt; 4479

&lt;211&gt; 2158

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4479

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<210> 4480

<211> 308

<212> PRT

<213> Homo sapiens

<400> 4480

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Asp	Tyr	Gly	Glu	Pro	Glu	Arg	Gly	Gly	Pro	Arg	Ala	Ala	Gln	Gly		35	40	45	
Glu	Met	Ser	Ser	Thr	Ser	Ser	Lys	Arg	Ala	Pro	Thr	Thr	Ala	Thr	Gln	50	55	60	
Arg	Leu	Lys	Gln	Asp	Tyr	Leu	Arg	Ile	Lys	Lys	Asp	Pro	Val	Pro	Tyr	65	70	75	80
Ile	Cys	Ala	Glu	Pro	Leu	Pro	Ser	Asn	Ile	Leu	Glu	Trp	His	Tyr	Val	85	90	95	
Val	Arg	Gly	Pro	Glu	Met	Thr	Pro	Tyr	Glu	Gly	Gly	Tyr	Tyr	His	Gly	100	105	110	
Lys	Leu	Ile	Phe	Pro	Arg	Glu	Phe	Pro	Phe	Lys	Pro	Pro	Ser	Ile	Tyr	115	120	125	
Met	Ile	Thr	Pro	Asn	Gly	Arg	Phe	Lys	Cys	Asn	Thr	Arg	Leu	Cys	Leu	130	135	140	
Ser	Ile	Thr	Asp	Phe	His	Pro	Asp	Thr	Trp	Asn	Pro	Ala	Trp	Ser	Val	145	150	155	160
Ser	Thr	Ile	Leu	Thr	Gly	Leu	Leu	Ser	Phe	Met	Val	Glu	Lys	Gly	Pro	165	170	175	
Thr	Leu	Gly	Ser	Ile	Glu	Thr	Ser	Asp	Phe	Thr	Lys	Arg	Gln	Leu	Ala	180	185	190	
Val	Gln	Ser	Leu	Ala	Phe	Asn	Leu	Lys	Asp	Lys	Val	Phe	Cys	Glu	Leu	195	200	205	
Phe	Pro	Glu	Val	Val	Glu	Glu	Ile	Lys	Gln	Lys	Gln	Lys	Ala	Gln	Asp	210	215	220	
Glu	Leu	Ser	Ser	Arg	Pro	Gln	Thr	Leu	Pro	Leu	Pro	Asp	Val	Val	Pro	225	230	235	240
Asp	Gly	Glu	Thr	His	Leu	Val	Gln	Asn	Gly	Ile	Gln	Leu	Leu	Asn	Gly	245	250	255	
His	Ala	Pro	Gly	Ala	Val	Pro	Asn	Leu	Ala	Gly	Leu	Gln	Gln	Ala	Asn	260	265	270	
Arg	His	His	Gly	Leu	Leu	Gly	Gly	Ala	Leu	Ala	Asn	Leu	Phe	Val	Ile				

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 <211> 320  
 <212> DNA  
 <213> Homo sapiens

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 320

<210> 4482  
 <211> 101  
 <212> PRT  
 <213> Homo sapiens

<400> 4482  
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 Trp Gly Leu Gly Thr Ser Cys Cys Ala Ala Arg Lys Gln Asp Ser Ala  
 20                      25                      30  
 Cys Pro Pro Thr Trp Gly Gly Asp Pro Gly Leu Gly Phe Val Gly Ala  
 35                      40                      45  
 Ser Arg Thr Pro Asp Phe Trp Gly Val Pro Asp Ser Arg Gly Gly Pro  
 50                      55                      60  
 Arg Ala Gly Leu Gly His Val Gln Ser Leu Ile Asp Leu Cys Pro Phe  
 65                      70                      75                      80  
 Leu Pro Leu Pro Leu Cys Ala Ser Leu Asp Ser Pro Arg Glu Phe Ser  
 85                      90                      95  
 Arg Met Gly Thr Gln  
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<210> 4483  
 <211> 1852  
 <212> DNA  
 <213> Homo sapiens

<400> 4483  
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180  
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240  
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300  
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360  
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<210> 4484

<211> 452

<212> PRT

<213> Homo sapiens

<400> 4484

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		20					25					30			
Lys	Pro	Leu	Ile	Trp	Tyr	Pro	Leu	Asn	Leu	Leu	Glu	Arg	Val	Gly	Phe
	35					40					45				
Glu	Glu	Val	Ile	Val	Val	Thr	Thr	Arg	Asp	Val	Gln	Lys	Ala	Leu	Cys
	50				55					60					
Ala	Glu	Phe	Lys	Met	Lys	Met	Lys	Pro	Asp	Ile	Val	Cys	Ile	Pro	Asp
65				70				75					80		
Asp	Ala	Asp	Met	Gly	Thr	Ala	Asp	Ser	Leu	Arg	Tyr	Ile	Tyr	Pro	Lys
			85					90					95		
Leu	Lys	Thr	Asp	Val	Leu	Val	Leu	Ser	Cys	Asp	Leu	Ile	Thr	Asp	Val
		100					105					110			
Ala	Leu	His	Glu	Val	Val	Asp	Leu	Phe	Arg	Ala	Tyr	Asp	Ala	Ser	Leu
	115					120					125				
Ala	Met	Leu	Met	Arg	Lys	Gly	Gln	Asp	Ser	Ile	Glu	Pro	Val	Pro	Gly
	130				135						140				
Gln	Lys	Gly	Lys	Lys	Lys	Ala	Val	Glu	Gln	Arg	Asp	Phe	Ile	Gly	Val
145				150				155						160	
Asp	Ser	Thr	Gly	Lys	Arg	Leu	Leu	Phe	Met	Ala	Asn	Glu	Ala	Asp	Leu
		165				170						175			
Asp	Glu	Glu	Leu	Val	Ile	Lys	Gly	Ser	Ile	Leu	Gln	Lys	His	Pro	Arg
	180					185						190			
Ile	Arg	Phe	His	Thr	Gly	Leu	Val	Asp	Ala	His	Leu	Tyr	Cys	Leu	Lys
	195					200					205				
Lys	Tyr	Ile	Val	Asp	Phe	Leu	Met	Glu	Asn	Gly	Ser	Ile	Thr	Ser	Ile
	210				215						220				
Arg	Ser	Glu	Leu	Ile	Pro	Tyr	Leu	Val	Arg	Lys	Gln	Phe	Ser	Ser	Ala
225				230				235						240	
Ser	Ser	Gln	Gln	Gly	Gln	Glu	Glu	Lys	Glu	Glu	Asp	Leu	Lys	Lys	Lys
		245						250				255			
Glu	Leu	Lys	Ser	Leu	Asp	Ile	Tyr	Ser	Phe	Ile	Lys	Glu	Ala	Asn	Thr
	260					265						270			
Leu	Asn	Leu	Ala	Pro	Tyr	Asp	Ala	Cys	Trp	Asn	Ala	Cys	Arg	Gly	Asp
	275					280					285				
Arg	Trp	Glu	Asp	Leu	Ser	Arg	Ser	Gln	Val	Arg	Cys	Tyr	Val	His	Ile
	290				295					300					
Met	Lys	Glu	Gly	Leu	Cys	Ser	Arg	Val	Ser	Thr	Leu	Gly	Leu	Tyr	Met
305				310				315					320		
Glu	Ala	Asn	Arg	Gln	Val	Pro	Lys	Leu	Leu	Ser	Ala	Leu	Cys	Pro	Glu

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Glu Pro Pro Val His Ser Ser Ala Gln Ile Val Ser Lys His Leu Val
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Gly Val Asp Ser Leu Ile Gly Pro Glu Thr Gln Ile Gly Glu Lys Ser
          355          360          365
Ser Ile Lys Arg Ser Val Ile Gly Ser Ser Cys Leu Ile Lys Asp Arg
          370          375          380
Val Thr Ile Thr Asn Cys Leu Leu Met Asn Ser Val Thr Val Glu Glu
385          390          395          400
Gly Ser Asn Ile Gln Gly Ser Val Ile Cys Asn Asn Ala Val Ile Glu
          405          410          415
Lys Gly Ala Asp Ile Lys Asp Cys Leu Ile Gly Ser Gly Gln Arg Ile
          420          425          430
Glu Ala Lys Ala Lys Arg Val Asn Glu Val Ile Val Gly Asn Asp Gln
          435          440          445
Leu Met Glu Ile
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&lt;210&gt; 4485

&lt;211&gt; 513

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4485

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120
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480
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513

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&lt;210&gt; 4486

&lt;211&gt; 100

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4486

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Met Gly Ser Gly Ile Pro His Pro His Pro Lys Cys Val Leu Pro Gln
  1          5          10          15
Pro Phe Val Phe Arg Pro Thr Gly Leu Ile Ala Pro Cys Ala Cys Pro
          20          25          30
Ser Ile Ser Leu Pro Ser Gly Ala Pro Gly Gly Gln Gly Asp Leu Leu

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      35              40              45
Pro Gln Ala Val Pro His Leu Ile Pro Lys Val Ser Ser Asn Glu Val
      50              55              60
Asp Ser Phe Lys Tyr Trp Trp Phe Trp Leu Ala Arg Val Ser Glu Gly
65              70              75              80
Thr Glu Lys Thr Pro Lys Cys Arg Val Cys Asp Thr Ala Gln Ser Ser
      85              90              95
Pro Met Pro Asn
      100

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&lt;210&gt; 4487

&lt;211&gt; 387

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4487

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120
ggaaagtgtg atattttatt caatagagtt caagcaattc agaagaaaag tggaaacttt
180
gatctgctgt tgtgtgtagg aaatttcttt ggctccaccc aagatgctga atgggaggag
240
tataagactg gcatcaagaa agctcctatt cagacatatg tgcttggtgc taataaccag
300
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360
ctgggtcgta aaggtatctt cactgga
387

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&lt;210&gt; 4488

&lt;211&gt; 129

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4488

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Gln Ser Gln Pro Ile Leu Phe Gly Gln Met Ala Gln Lys Pro Leu Arg
      20              25              30
Leu Leu Ala Cys Gly Asp Val Glu Gly Lys Phe Asp Ile Leu Phe Asn
      35              40              45
Arg Val Gln Ala Ile Gln Lys Lys Ser Gly Asn Phe Asp Leu Leu Leu
      50              55              60
Cys Val Gly Asn Phe Phe Gly Ser Thr Gln Asp Ala Glu Trp Glu Glu
65              70              75              80
Tyr Lys Thr Gly Ile Lys Lys Ala Pro Ile Gln Thr Tyr Val Leu Gly
      85              90              95
Ala Asn Asn Gln Glu Thr Val Lys Tyr Phe Gln Asp Ala Asp Gly Cys
      100              105              110
Glu Leu Ala Glu Asn Ile Thr Tyr Leu Gly Arg Lys Gly Ile Phe Thr
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Gly

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<210> 4489  
<211> 2390  
<212> DNA  
<213> Homo sapiens

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120  
gagccagggtg cctatatctt tctccagaac cccccagggtc tgcctagcat tgctgtctgc  
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240  
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<211> 383

<212> PRT

<213> Homo sapiens

<400> 4490

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&lt;210&gt; 4491

&lt;211&gt; 6712

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4491

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&lt;210&gt; 4492

&lt;211&gt; 674

&lt;212&gt; PRT



&lt;213&gt; Homo sapiens

&lt;400&gt; 4492

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&lt;210&gt; 4493

&lt;211&gt; 1829

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4493

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&lt;210&gt; 4494

&lt;211&gt; 111

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4494

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 35           40           45
Leu Val His Leu Ala Leu Arg Phe Lys Cys Asn Gln Asn Cys Pro Gln
 50           55           60
Gly Pro Ala Ile Lys Ala Leu Ser Leu Ser Thr Phe Trp Tyr Leu Val
 65           70           75           80
Arg Glu Leu Phe Thr Val Arg Lys Cys Gly Lys Ile Ala Leu Cys Val
 85           90           95
Cys Val Cys Val Cys Val Cys Val Cys Asn Leu Leu Gly Trp Gly
 100           105           110

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&lt;210&gt; 4495

&lt;211&gt; 3623

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4495

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960

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&lt;210&gt; 4496

&lt;211&gt; 560

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4496

Met	Phe	Ala	Arg	Met	Ser	Asp	Leu	His	Val	Leu	Leu	Leu	Met	Ala	Leu
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Val	Gly	Lys	Thr	Ala	Cys	Gly	Phe	Ser	Leu	Met	Ser	Leu	Leu	Glu	Ser
			20					25					30		
Leu	Asp	Pro	Asp	Trp	Thr	Pro	Asp	Gln	Tyr	Asp	Tyr	Ser	Tyr	Glu	Asp
		35				40					45				
Tyr	Asn	Gln	Glu	Glu	Asn	Thr	Ser	Ser	Thr	Leu	Thr	His	Ala	Glu	Asn
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Pro	Asp	Trp	Tyr	Tyr	Thr	Glu	Asp	Gln	Ala	Asp	Pro	Cys	Gln	Pro	Asn
65					70				75				80		
Pro	Cys	Glu	His	Gly	Gly	Asp	Cys	Leu	Val	His	Gly	Ser	Thr	Phe	Thr

85 90 95  
 Cys Ser Cys Leu Ala Pro Phe Ser Gly Asn Lys Cys Gln Lys Val Gln  
 100 105 110  
 Asn Thr Cys Lys Asp Asn Pro Cys Gly Arg Gly Gln Cys Leu Ile Thr  
 115 120 125  
 Gln Ser Pro Pro Tyr Tyr Arg Cys Val Cys Lys His Pro Tyr Thr Gly  
 130 135 140  
 Pro Ser Cys Ser Gln Val Val Pro Val Cys Arg Pro Asn Pro Cys Gln  
 145 150 155 160  
 Asn Gly Ala Thr Cys Ser Arg His Lys Arg Arg Ser Lys Phe Thr Cys  
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 Ala Cys Pro Asp Gln Phe Lys Gly Lys Phe Cys Glu Ile Gly Ser Asp  
 180 185 190  
 Asp Cys Tyr Val Gly Asp Gly Tyr Ser Tyr Arg Gly Lys Met Asn Arg  
 195 200 205  
 Thr Val Asn Gln His Ala Cys Leu Tyr Trp Asn Ser His Leu Leu Leu  
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 Gln Glu Asn Tyr Asn Met Phe Met Glu Asp Ala Glu Thr His Gly Ile  
 225 230 235 240  
 Gly Glu His Asn Phe Cys Arg Asn Pro Asp Ala Asp Glu Lys Pro Trp  
 245 250 255  
 Cys Phe Ile Lys Val Thr Asn Asp Lys Val Lys Trp Glu Tyr Cys Asp  
 260 265 270  
 Val Ser Ala Cys Ser Ala Gln Asp Val Ala Tyr Pro Glu Glu Ser Pro  
 275 280 285  
 Thr Glu Pro Ser Thr Lys Leu Pro Gly Phe Asp Ser Cys Gly Lys Thr  
 290 295 300  
 Glu Ile Ala Glu Arg Lys Ile Lys Arg Ile Tyr Gly Gly Phe Lys Ser  
 305 310 315 320  
 Thr Ala Gly Lys His Pro Trp Gln Ala Ser Leu Gln Ser Ser Leu Pro  
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 Leu Thr Ile Ser Met Pro Gln Gly His Phe Cys Gly Gly Ala Leu Ile  
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 His Pro Cys Trp Val Leu Thr Ala Ala His Cys Thr Asp Ile Lys Thr  
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 Arg His Leu Lys Val Val Leu Gly Asp Gln Asp Leu Lys Lys Glu Glu  
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 Phe His Glu Gln Ser Phe Arg Val Glu Lys Ile Phe Lys Tyr Ser His  
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 Tyr Asn Glu Arg Asp Glu Ile Pro His Asn Asp Ile Ala Leu Leu Lys  
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 420 425 430  
 Thr Val Cys Leu Pro Asp Gly Ser Phe Pro Ser Gly Ser Glu Cys His  
 435 440 445  
 Ile Ser Gly Trp Gly Val Thr Glu Thr Gly Lys Gly Ser Arg Gln Leu  
 450 455 460  
 Leu Asp Ala Lys Val Lys Leu Ile Ala Asn Thr Leu Cys Asn Ser Arg  
 465 470 475 480  
 Gln Leu Tyr Asp His Met Ile Asp Asp Ser Met Ile Cys Ala Gly Asn  
 485 490 495  
 Leu Gln Lys Pro Gly Gln Asp Thr Cys Gln Gly Asp Ser Gly Gly Pro  
 500 505 510  
 Leu Thr Cys Glu Lys Asp Gly Thr Tyr Tyr Val Tyr Gly Ile Val Ser

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Trp	Gly	Leu	Glu	Cys	Gly	Lys	Arg	Pro	Gly	Val	Tyr	Thr	Gln	Val	Thr
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Lys	Phe	Leu	Asn	Trp	Ile	Lys	Ala	Thr	Ile	Lys	Ser	Glu	Ser	Gly	Phe
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&lt;210&gt; 4497

&lt;211&gt; 840

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4497

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840

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&lt;210&gt; 4498

&lt;211&gt; 280

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4498

Xaa	Arg	Val	Lys	Gln	Lys	Ala	Glu	Lys	Lys	Arg	Leu	Lys	Lys	Lys	Arg
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Gln	Lys	Glu	Arg	Lys	Arg	Gln	Glu	Arg	Leu	Glu	Gln	Tyr	Cys	Gly	Glu
		20					25					30			
Pro	Lys	Ala	Ser	Thr	Thr	Ser	Asp	Gly	Asp	Glu	Ser	Pro	Pro	Ser	Ser
	35					40			45						
Pro	Gly	Asn	Pro	Val	Gln	Gly	Gln	Cys	Gly	Glu	Glu	Glu	Asp	Ser	Leu



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Asp Leu Ser Ser Thr Phe Val Ser Leu Ala Leu Arg Lys Val Gly Asp
65              70              75              80
Trp Pro Leu Ser Ala Arg Arg Glu Lys Gly Leu Asn Gln Glu Pro Gln
      85              90              95
Gly Arg Gly Leu Ala Leu Gln Lys Met Gly Gln Glu Glu Glu Ser Pro
      100              105              110
Pro Arg Glu Glu Arg Pro Gln Gln Ser Pro Lys Ala Ser Pro Gly Leu
      115              120              125
Leu Ala Ala Ala Leu Gln Gln Ser Gln Glu Leu Ala Lys Leu Gly Thr
      130              135              140
Ser Phe Ala Gln Asn Gly Phe Tyr His Glu Ala Val Val Leu Phe Thr
145              150              155              160
Gln Ala Leu Lys Leu Asn Pro Gln Asp His Arg Leu Phe Gly Asn Arg
      165              170              175
Ser Phe Cys His Glu Arg Leu Gly Gln Pro Ala Trp Ala Leu Ala Asp
      180              185              190
Ala Gln Val Ala Leu Thr Leu Arg Pro Gly Trp Pro Arg Gly Leu Phe
      195              200              205
Arg Leu Gly Lys Ala Leu Met Gly Leu Gln Arg Phe Arg Glu Ala Ala
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Ala Val Phe Gln Glu Thr Leu Arg Gly Gly Ser Gln Pro Asp Ala Ala
225              230              235              240
Arg Glu Leu Arg Ser Cys Leu Leu His Leu Thr Leu Gln Gly Gln Arg
      245              250              255
Gly Gly Ile Cys Ala Pro Pro Leu Ser Pro Gly Ala Leu Gln Pro Leu
      260              265              270
Pro His Ala Glu Leu Ala Pro Ser
      275              280

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&lt;210&gt; 4499

&lt;211&gt; 562

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4499

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<210> 4500

<211> 91

<212> PRT

<213> Homo sapiens

<400> 4500

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			20				25					30			
His	Gly	Leu	Ser	Pro	Leu	Asn	Val	Ile	Ala	Glu	Asp	Gly	Thr	Met	Thr
	35					40					45				
Ser	Leu	Cys	Gly	Asp	Trp	Leu	Gln	Gly	Leu	His	Arg	Phe	Val	Ala	Arg
	50				55				60						
Glu	Lys	Ile	Met	Ser	Val	Leu	Ser	Glu	Arg	Gly	Leu	Phe	Arg	Gly	Leu
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Gln	Asn	His	Pro	Met	Val	Leu	Pro	Ile	Cys	Arg					
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<210> 4501

<211> 1866

<212> DNA

<213> Homo sapiens

<400> 4501

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 1860  
 gtgttt  
 1866

&lt;210&gt; 4502

&lt;211&gt; 267

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4502

Met	Ser	Gly	Cys	Phe	Pro	Val	Ser	Gly	Leu	Arg	Cys	Leu	Ser	Arg	Asp
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Gly	Arg	Met	Ala	Ala	Gln	Gly	Ala	Pro	Arg	Phe	Leu	Leu	Thr	Phe	Asp
			20					25					30		
Phe	Asp	Glu	Thr	Ile	Val	Asp	Glu	Asn	Ser	Asp	Asp	Ser	Ile	Val	Arg
		35					40					45			
Ala	Ala	Pro	Gly	Gln	Arg	Leu	Pro	Glu	Ser	Leu	Arg	Ala	Thr	Tyr	Arg
		50				55					60				
Glu	Gly	Phe	Tyr	Asn	Glu	Tyr	Met	Gln	Arg	Val	Phe	Lys	Tyr	Leu	Gly

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65              70              75              80
Glu Gln Gly Val Arg Pro Arg Asp Leu Ser Ala Ile Tyr Glu Ala Ile
              85              90              95
Pro Leu Ser Pro Gly Met Ser Asp Leu Leu Gln Phe Val Ala Lys Gln
              100              105              110
Gly Ala Cys Phe Glu Val Ile Leu Ile Ser Asp Ala Asn Thr Phe Gly
              115              120              125
Val Glu Ser Ser Leu Arg Ala Ala Gly His His Ser Leu Phe Arg Arg
              130              135              140
Ile Leu Ser Asn Pro Ser Gly Pro Asp Ala Arg Gly Leu Leu Ala Leu
145              150              155              160
Arg Pro Phe His Thr His Ser Cys Ala Arg Cys Pro Ala Asn Met Cys
              165              170              175
Lys His Lys Val Leu Ser Asp Tyr Leu Arg Glu Arg Ala His Asp Gly
              180              185              190
Val His Phe Glu Arg Leu Phe Tyr Val Gly Asp Gly Ala Asn Asp Phe
              195              200              205
Cys Pro Met Gly Leu Leu Ala Gly Gly Asp Val Ala Phe Pro Arg Arg
              210              215              220
Gly Tyr Pro Met His Arg Leu Ile Gln Glu Ala Gln Lys Ala Glu Pro
225              230              235              240
Ser Ser Phe Arg Ala Ser Val Val Pro Trp Glu Thr Ala Ala Asp Val
              245              250              255
Arg Leu His Leu Gln Gln Val Leu Lys Ser Cys
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&lt;210&gt; 4503

&lt;211&gt; 1983

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4503

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 1983

&lt;210&gt; 4504

&lt;211&gt; 250

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

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 Leu Lys Lys Lys Ser Asp Ala Leu Thr Leu Arg Phe Arg Gln Ile Leu  
                   35                  40                  45  
 Lys Lys Ile Ile Glu Thr Lys Met Leu Met Gly Glu Val Met Arg Glu  
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 Ala Ala Phe Ser Leu Ala Glu Ala Lys Phe Thr Ala Gly Asp Phe Ser  
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 Thr Thr Val Ile Gln Asn Val Asn Lys Ala Gln Val Lys Ile Arg Ala  
                   85                  90                  95  
 Lys Lys Asp Asn Val Ala Gly Val Thr Leu Pro Val Phe Glu His Tyr  
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 His Glu Gly Thr Asp Ser Tyr Glu Leu Thr Gly Leu Ala Arg Gly Gly  
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 Glu Gln Leu Ala Lys Leu Lys Arg Asn Tyr Ala Lys Ala Val Glu Leu  
                   130                  135                  140  
 Leu Val Glu Leu Ala Ser Leu Gln Thr Ser Phe Val Thr Leu Asp Glu  
 145                  150                  155                  160  
 Ala Ile Lys Ile Thr Asn Arg Arg Val Asn Ala Ile Glu His Gly Glu  
                   165                  170                  175  
 Tyr Val Ile Ile Pro Arg Ile Glu Arg Thr Leu Ala Tyr Ile Ile Thr  
                   180                  185                  190  
 Glu Leu Asp Glu Arg Glu Arg Glu Glu Phe Tyr Arg Leu Lys Lys Ile  
                   195                  200                  205  
 Gln Glu Lys Lys Lys Ile Leu Lys Glu Lys Ser Glu Lys Asp Leu Glu  
                   210                  215                  220  
 Gln Arg Arg Ala Ala Gly Glu Val Leu Glu Pro Ala Asn Leu Leu Ala  
 225                  230                  235                  240  
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&lt;210&gt; 4505

&lt;211&gt; 379

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4505

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 379

&lt;210&gt; 4506

&lt;211&gt; 121

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4506

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 20           25           30
Arg Arg Gln Trp Trp Leu Trp Leu Ser Ser Leu Ser Asn Gln Ile His
 35           40           45
Pro Thr Pro Ser Ala Gln Gly Gln Ala Ala Leu Arg Gln Thr Cys Pro
 50           55           60
His Leu Arg Glu Ser Gly Pro Leu Ser Val Arg His Val Ala Leu Leu
 65           70           75           80
Ala Leu Glu Thr Ala Ser His Pro Ser Gly Pro His Thr Asn Gln Ala
 85           90           95
Pro Ser Pro Ala Thr Ser Pro Lys Cys Pro Ser Glu Pro Ala Thr Pro
100           105           110
Ser Ser Thr Asp Ser Leu Ile Lys Ile
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&lt;210&gt; 4507

&lt;211&gt; 3664

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4507

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<211> 172

<212> PRT

<213> Homo sapiens

<400> 4508

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 Gln Ala Gly Lys Ser Ser Asp Asn Arg Ser Arg Gly Tyr Arg Gly Gly  
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 Glu Ser Arg Ser Gly Gly Tyr Gly Gly Ser Arg Asp Tyr Tyr Ser Ser  
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&lt;210&gt; 4509

&lt;211&gt; 11680

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4509

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&lt;211&gt; 3266

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4510

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		35				40					45				
His	Asp	Leu	Arg	Asn	Ile	Phe	Gln	Arg	Phe	Gly	Glu	Ile	Val	Asp	Ile
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Asn Lys Ile Lys Val Asp Phe Ala Asn Arg Glu Ser Gln Leu Ala Phe
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Tyr His Cys Met Glu Lys Ser Gly Gln Asp Ile Arg Asp Phe Tyr Glu
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 Val Thr Glu Glu Lys Thr Val Glu Pro Ala Thr Val Ser Glu Glu Ala  
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 Lys Pro Ala Ser Glu Pro Ala Pro Ala Pro Val Glu Gln Leu Glu Gln  
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 Val Asp Leu Pro Pro Gly Ala Asp Pro Asp Lys Glu Ala Ala Met Met  
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 Asn Val Asp Pro Glu Pro Asp Ser Thr Gln Pro Leu Ser Lys Pro Ala  
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 Glu Gly Leu Ala Pro Glu Asp Arg Asp Lys Pro Ala His Gln Ala Ser

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 Gln Thr Asp Leu Gln Pro Pro Ala Gly Ala Gln Ala Leu Gln Pro Ser  
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 Glu Glu Gly Met Glu Thr Asp Glu Ala Val Ser Gly Ile Leu Glu Thr  
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Ser Lys Gly Pro Gln Ala Pro Ala Gly Tyr Ala Asn Val Ala Thr His			
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Ser Thr Leu Val Leu Thr Ala Gln Thr Tyr Asn Ala Ser Pro Val Ile			
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Phe Ile Thr Tyr Leu Gln Ala Lys Gln Ala Ala Gly Ile Ile Asn Val		3200
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Pro Asn Pro Gly Ser Asn Gln Pro Ala Tyr Val Leu Gln Ile Phe Pro		3215
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Pro Cys Glu Phe Ser Glu Ser His Leu Ser Arg Leu Ala Pro Asp Leu		3230
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3265		

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&lt;211&gt; 1375

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4511

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<211> 244

<212> PRT

<213> Homo sapiens

<400> 4512

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Lys	Glu	Glu	Trp	Asn	Glu	Ile	Arg	His	Gln	Ile	Gly	Asn	Thr	Leu	Ile
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Ile	Lys	Arg	Arg	Leu	Thr	Arg	Lys	Leu	Ser	Gln	Arg	Pro	Thr	Val	Ala
			165						170					175	
Glu	Leu	Leu	Ala	Arg	Lys	Ile	Leu	Arg	Phe	Asn	Glu	Tyr	Val	Glu	Val
			180					185						190	
Thr	Asp	Ala	Gln	Asp	Tyr	Asp	Arg	Arg	Ala	Asp	Lys	Pro	Trp	Thr	Lys

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Leu Thr Pro Ala Asp Lys Ala Ala Ile Arg Lys Glu Leu Asn Glu Phe		
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Tyr His Arg Pro		240

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 35 40 45  
 Ile Met Lys Met Ile Ser Ala Thr Glu Gly Pro Val Lys Ala Arg Glu  
 50 55 60  
 Val Gln Lys Phe Thr Glu Asp Leu Val Gly Ser Val Val His Val Leu  
 65 70 75 80  
 Ser His Arg Gln Glu Leu Arg Gly Trp Thr Gly Lys Glu Ala Pro Gly  
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110

&lt;210&gt; 4515

&lt;211&gt; 3207

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4515

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<210> 4516  
 <211> 901  
 <212> PRT  
 <213> Homo sapiens

<400> 4516  
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 35 40 45  
 Ala Arg Ala Arg Ala Arg Ala Ala Leu Ala Arg Ala Ala Leu Ala Pro  
 50 55 60  
 Arg Leu Pro His Asn Leu Ser Leu Glu Leu Val Val Ala Ala Pro Pro  
 65 70 75 80  
 Ala Arg Asp Pro Ala Ser Leu Thr Arg Gly Leu Cys Gln Ala Leu Val  
 85 90 95  
 Pro Pro Gly Val Ala Ala Leu Leu Ala Phe Pro Glu Ala Arg Pro Glu  
 100 105 110  
 Leu Leu Gln Leu His Phe Leu Ala Ala Thr Glu Thr Pro Val Leu  
 115 120 125  
 Ser Leu Leu Arg Arg Glu Ala Arg Ala Pro Leu Gly Ala Pro Asn Pro  
 130 135 140  
 Phe His Leu Gln Leu His Trp Ala Ser Pro Leu Glu Thr Leu Leu Asp  
 145 150 155 160  
 Val Leu Val Ala Val Leu Gln Ala His Ala Trp Glu Asp Val Gly Leu  
 165 170 175  
 Ala Leu Cys Arg Thr Gln Asp Pro Gly Gly Leu Val Ala Leu Trp Thr  
 180 185 190  
 Ser Arg Ala Gly Arg Pro Pro Gln Leu Val Leu Asp Leu Ser Arg Arg  
 195 200 205  
 Asp Thr Gly Asp Ala Gly Leu Arg Ala Arg Leu Ala Pro Met Ala Ala  
 210 215 220  
 Pro Val Gly Gly Glu Ala Pro Val Pro Ala Ala Val Leu Leu Gly Cys  
 225 230 235 240  
 Asp Ile Ala Arg Ala Arg Arg Val Leu Glu Ala Val Pro Pro Gly Pro  
 245 250 255  
 His Trp Leu Leu Gly Thr Pro Leu Pro Pro Lys Ala Leu Pro Thr Ala  
 260 265 270  
 Gly Leu Pro Pro Gly Leu Leu Ala Leu Gly Glu Val Ala Arg Pro Pro  
 275 280 285  
 Leu Glu Ala Ala Ile His Asp Ile Val Gln Leu Val Ala Arg Ala Leu

290		295		300
Gly Ser Ala Ala Gln Val Gln Pro Lys Arg Ala Leu Leu Pro Ala Pro				
305		310		315
Val Asn Cys Gly Asp Leu Gln Pro Ala Gly Pro Glu Ser Pro Gly Arg				320
	325		330	335
Phe Leu Ala Arg Phe Leu Ala Asn Thr Ser Phe Gln Gly Arg Thr Gly				
	340		345	350
Pro Val Trp Val Thr Gly Ser Ser Gln Val His Met Ser Arg His Phe				
	355		360	365
Lys Val Trp Ser Leu Arg Arg Asp Pro Arg Gly Ala Pro Ala Trp Ala				
	370		375	380
Thr Val Gly Ser Trp Arg Tyr Gly Gln Leu Asp Leu Glu Pro Gly Gly				
385		390		395
Ala Ser Ala Trp Pro Pro Pro Gln Gly Ala Gln Val Arg Pro Lys				400
	405		410	415
Leu Arg Val Val Thr Leu Leu Glu His Pro Phe Val Phe Ala Arg Asp				
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Pro Asp Glu Asp Gly Gln Cys Pro Ala Gly Gln Leu Cys Leu Asp Pro				
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Gly Thr Asn Asp Ser Ala Thr Leu Asp Ala Leu Phe Ala Ala Leu Ala				
	450		455	460
Asn Gly Ser Ala Pro Arg Ala Leu Arg Lys Cys Cys Tyr Gly Tyr Cys				
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Ile Asp Leu Leu Glu Arg Leu Ala Glu Asp Thr Pro Phe Asp Phe Glu				
	485		490	495
Leu Tyr Leu Val Gly Asp Gly Lys Tyr Gly Ala Leu Arg Asp Gly Arg				
	500		505	510
Trp Thr Gly Leu Val Gly Asp Leu Leu Ala Gly Arg Ala His Met Ala				
	515		520	525
Val Thr Ser Phe Ser Ile Asn Ser Ala Arg Ser Gln Val Val Asp Phe				
	530		535	540
Thr Ser Pro Phe Phe Ser Thr Ser Leu Gly Ile Met Val Arg Ala Arg				
545		550		555
Asp Thr Ala Ser Pro Ile Gly Ala Phe Met Trp Pro Leu His Trp Ser				
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Thr Trp Leu Gly Val Phe Ala Ala Leu His Leu Thr Ala Leu Phe Leu				
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Thr Val Tyr Glu Trp Arg Ser Pro Tyr Gly Leu Thr Pro Arg Gly Arg				
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Asn Arg Ser Thr Val Phe Ser Tyr Ser Ser Ala Leu Asn Leu Cys Tyr				
610		615		620
Ala Ile Leu Phe Arg Arg Thr Val Ser Ser Lys Thr Pro Lys Cys Pro				
625		630		635
Thr Gly Arg Leu Leu Met Asn Leu Trp Ala Ile Phe Cys Leu Leu Val				
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Leu Ser Ser Tyr Thr Ala Asn Leu Ala Ala Val Met Val Gly Asp Lys				
	660		665	670
Thr Phe Glu Glu Leu Ser Gly Ile His Asp Pro Lys Leu His His Pro				
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Ala Gln Gly Phe Arg Phe Gly Thr Val Trp Glu Ser Ser Ala Glu Ala				
	690		695	700
Tyr Ile Lys Lys Ser Phe Pro Asp Met His Ala His Met Arg Arg His				
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Ser Ala Pro Thr Thr Pro Arg Gly Val Ala Met Leu Thr Ser Asp Pro				720

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<211> 2275
<212> DNA
<213> Homo sapiens
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540
gagctcatca gcctgggtgga gctgatcctg gccgaggcgg agacgcggag ccaggacggg
600
gacacagccg cctgcagcct catccaggcc cggctgcccc tgctgctcag ctgctgctgt
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720

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1980  
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2040  
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2275

&lt;210&gt; 4518

&lt;211&gt; 650

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4518

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 20           25           30
Val Ser Ser Leu Leu Leu Gln Glu Glu Glu Pro Leu Ala Gly Gly Lys
 35           40           45
Pro Gly Ala Asp Gly Gly Ser Leu Glu Ala Val Arg Leu Gly Pro Ser
 50           55           60
Ser Gly Leu Leu Val Asp Trp Leu Glu Met Leu Asp Pro Glu Val Val
 65           70           75           80
Ser Ser Cys Pro Asp Leu Gln Leu Arg Leu Leu Phe Ser Arg Arg Lys
 85           90           95
Gly Lys Gly Gln Ala Gln Val Pro Ser Phe Arg Pro Tyr Leu Leu Thr
 100          105          110
Leu Phe Thr His Gln Ser Ser Trp Pro Thr Leu His Gln Cys Ile Arg
 115          120          125
Val Leu Leu Gly Lys Ser Arg Glu Gln Arg Phe Asp Pro Ser Ala Ser
 130          135          140
Leu Asp Phe Leu Trp Ala Cys Ile His Val Pro Arg Ile Trp Gln Gly
 145          150          155          160
Arg Asp Gln Arg Thr Pro Gln Lys Arg Arg Glu Glu Leu Val Leu Arg
 165          170          175
Val Gln Gly Pro Glu Leu Ile Ser Leu Val Glu Leu Ile Leu Ala Glu
 180          185          190
Ala Glu Thr Arg Ser Gln Asp Gly Asp Thr Ala Ala Cys Ser Leu Ile
 195          200          205
Gln Ala Arg Leu Pro Leu Leu Leu Ser Cys Cys Cys Gly Asp Asp Glu
 210          215          220
Ser Val Arg Lys Val Thr Glu His Leu Ser Gly Cys Ile Gln Gln Trp
 225          230          235          240
Gly Asp Ser Val Leu Gly Arg Arg Cys Arg Asp Leu Leu Leu Gln Leu
 245          250          255
Tyr Leu Gln Arg Pro Glu Leu Arg Val Pro Val Pro Glu Val Leu Leu
 260          265          270
His Ser Glu Gly Ala Ala Ser Ser Val Cys Lys Leu Asp Gly Leu
 275          280          285
Ile His Arg Phe Ile Thr Leu Leu Ala Asp Thr Ser Asp Ser Arg Ala
 290          295          300
Leu Glu Asn Arg Gly Ala Asp Ala Ser Met Ala Cys Arg Lys Leu Ala
 305          310          315          320
Val Ala His Pro Leu Leu Leu Arg His Leu Pro Met Ile Ala Ala
 325          330          335
Leu Leu His Gly Arg Thr His Leu Asn Phe Gln Glu Phe Arg Gln Gln
 340          345          350
Asn His Leu Ser Cys Phe Leu His Val Leu Gly Leu Leu Glu Leu Leu
 355          360          365
Gln Pro His Val Phe Arg Ser Glu His Gln Gly Ala Leu Trp Asp Cys
 370          375          380
Leu Leu Ser Phe Ile Arg Leu Leu Leu Asn Tyr Arg Lys Ser Ser Arg

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385          390          395          400
His Leu Ala Ala Phe Ile Asn Lys Phe Val Gln Phe Ile His Lys Tyr
          405          410          415
Ile Thr Tyr Asn Ala Pro Ala Ala Ile Ser Phe Leu Gln Lys His Ala
          420          425          430
Asp Pro Leu His Asp Leu Ser Phe Asp Asn Ser Asp Leu Val Met Leu
          435          440          445
Lys Ser Leu Leu Ala Gly Leu Ser Leu Pro Ser Arg Asp Asp Arg Thr
          450          455          460
Asp Arg Gly Leu Asp Glu Glu Gly Glu Glu Glu Ser Ser Ala Gly Ser
465          470          475          480
Leu Pro Leu Val Ser Val Ser Leu Phe Thr Pro Leu Thr Ala Ala Glu
          485          490          495
Met Ala Pro Tyr Met Lys Arg Leu Ser Arg Gly Gln Thr Val Glu Gly
          500          505          510
Glu Ser Gly Pro Ala Ser Pro Thr Pro Asp Leu Leu Glu Val Leu Ser
          515          520          525
Asp Ile Asp Glu Met Ser Arg Arg Arg Pro Glu Ile Leu Ser Phe Phe
          530          535          540
Ser Thr Asn Leu Gln Arg Leu Met Ser Ser Ala Glu Glu Cys Cys Arg
545          550          555          560
Asn Leu Ala Phe Ser Leu Ala Leu Arg Ser Met Gln Asn Ser Pro Ser
          565          570          575
Ile Ala Ala Ala Phe Leu Pro Thr Phe Met Tyr Cys Leu Gly Ser Gln
          580          585          590
Asp Phe Glu Val Val Gln Thr Ala Leu Arg Asn Leu Pro Glu Tyr Ala
          595          600          605
Leu Leu Cys Gln Glu His Ala Ala Val Leu Leu His Arg Ala Phe Leu
          610          615          620
Val Gly Met Tyr Gly Gln Met Asp Pro Ser Ala Gln Ile Ser Glu Ala
625          630          635          640
Leu Arg Ile Leu His Met Glu Ala Val Met
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<210> 4519  
<211> 2326  
<212> DNA  
<213> Homo sapiens

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120
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180
tatgtatctg gcggaattg ggaaagcttc tgagaaagtc catggggccg atgtatggga
240
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300
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360
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420

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540  
atcatctgtg agtactttga gcccagcct ctctggagc aggettgcct cattccttgc  
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660  
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720  
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840  
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900  
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960  
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1020  
aacaagacgg ggaaagctgc tgatttaagc ttttgccagc aagagaagct tccaatgacc  
1080  
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1200  
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<210> 4520

<211> 617

<212> PRT

<213> Homo sapiens

<400> 4520

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Thr	Asn	Cys	Lys	Gln	Ala	Glu	Arg	Pro	Asn	Asn	Gln	Gln	Asn	Cys	Phe
		35					40				45				
Lys	Val	Cys	Asp	Trp	His	Lys	Glu	Leu	Tyr	Asp	Trp	Arg	Leu	Gly	Pro
	50					55				60					
Trp	Asn	Gln	Cys	Gln	Pro	Val	Ile	Ser	Lys	Ser	Leu	Glu	Lys	Pro	Leu
65					70					75				80	
Glu	Cys	Ile	Lys	Gly	Glu	Glu	Gly	Ile	Gln	Val	Arg	Glu	Ile	Ala	Cys
			85						90					95	
Ile	Gln	Lys	Asp	Lys	Asp	Ile	Pro	Ala	Glu	Asp	Ile	Ile	Cys	Glu	Tyr
		100						105					110		
Phe	Glu	Pro	Lys	Pro	Leu	Leu	Glu	Gln	Ala	Cys	Leu	Ile	Pro	Cys	Gln
		115					120					125			
Gln	Asp	Cys	Ile	Val	Ser	Glu	Phe	Ser	Ala	Trp	Ser	Glu	Cys	Ser	Lys
	130					135				140					
Thr	Cys	Gly	Ser	Gly	Leu	Gln	His	Arg	Thr	Arg	His	Val	Val	Ala	Pro
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Pro	Gln	Phe	Gly	Gly	Ser	Gly	Cys	Pro	Asn	Leu	Thr	Glu	Phe	Gln	Val
			165						170					175	
Cys	Gln	Ser	Ser	Pro	Cys	Glu	Ala	Glu	Glu	Leu	Arg	Tyr	Ser	Leu	His
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Val	Gly	Pro	Trp	Ser	Thr	Cys	Ser	Met	Pro	His	Ser	Arg	Gln	Val	Arg
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Gln	Ala	Arg	Arg	Arg	Gly	Lys	Asn	Lys	Glu	Arg	Glu	Lys	Asp	Arg	Ser
	210					215					220				
Lys	Gly	Val	Lys	Asp	Pro	Glu	Ala	Arg	Glu	Leu	Ile	Lys	Lys	Lys	Arg
225					230					235				240	
Asn	Arg	Asn	Arg	Gln	Asn	Arg	Gln	Glu	Asn	Lys	Tyr	Trp	Asp	Ile	Gln
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Ile	Gly	Tyr	Gln	Thr	Arg	Glu	Val	Met	Cys	Ile	Asn	Lys	Thr	Gly	Lys
		260					265						270		
Ala	Ala	Asp	Leu	Ser	Phe	Cys	Gln	Gln	Glu	Lys	Leu	Pro	Met	Thr	Phe
		275					280					285			
Gln	Ser	Cys	Val	Ile	Thr	Lys	Glu	Cys	Gln	Val	Ser	Glu	Trp	Ser	Glu

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Lys Glu Cys Pro Glu Phe Glu Glu Lys Glu Pro Cys Leu Ser Gln Gly
      340              345              350
Asp Gly Val Val Pro Cys Ala Thr Tyr Gly Trp Arg Thr Thr Glu Trp
      355              360              365
Thr Glu Cys Arg Val Asp Pro Leu Leu Ser Gln Gln Asp Lys Arg Arg
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Gly Asn Gln Thr Ala Leu Cys Gly Gly Gly Ile Gln Thr Arg Glu Val
385              390              395              400
Tyr Cys Val Gln Ala Asn Glu Asn Leu Leu Ser Gln Leu Ser Thr His
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Lys Asn Lys Glu Ala Ser Lys Pro Met Asp Leu Lys Leu Cys Thr Gly
      420              425              430
Pro Ile Pro Asn Thr Thr Gln Leu Cys His Ile Pro Cys Pro Thr Glu
      435              440              445
Cys Glu Val Ser Pro Trp Ser Ala Trp Gly Pro Cys Thr Tyr Glu Asn
      450              455              460
Cys Asn Asp Pro Gln Gly Lys Lys Gly Phe Lys Leu Arg Lys Arg Arg
465              470              475              480
Ile Thr Asn Glu Pro Thr Gly Gly Ser Gly Leu Thr Gly Asn Cys Pro
      485              490              495
His Leu Leu Glu Ala Ile Pro Cys Glu Glu Pro Ala Cys Tyr Asp Trp
      500              505              510
Lys Ala Val Arg Leu Gly Asp Cys Glu Pro Asp Asn Gly Lys Glu Cys
      515              520              525
Gly Pro Gly Thr Gln Val Gln Glu Val Val Cys Ile Asn Ser Asp Gly
      530              535              540
Glu Glu Val Asp Arg Gln Leu Cys Arg Asp Ala Ile Phe Pro Ile Pro
545              550              555              560
Val Ala Cys Asp Ala Pro Cys Pro Lys Asp Cys Val Leu Ser Thr Trp
      565              570              575
Ser Thr Trp Ser Ser Cys Ser His Thr Cys Ser Gly Lys Thr Thr Glu
      580              585              590
Gly Lys Gln Ile Arg Ala Arg Ser Ile Leu Ala Tyr Ala Gly Glu Glu
      595              600              605
Gly Glu Ser Pro Ala Ser Asp Ala Ile
      610              615

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&lt;210&gt; 4521

&lt;211&gt; 1071

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4521

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180

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ataacttgct taccaccaa gatgcttgct ctaagaactg tgaagggatt caagaggaaa  
 240  
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 300  
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 360  
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 420  
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 480  
 aacaacaaac actcatatcc cacagttaca gaggctgaga agcctggggt caaggtacca  
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 720  
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 780  
 tagcaaagac acagagagaa tataatttaa ggcaaaaagc ttcaatagga tttcaaagca  
 840  
 aaccttgcac actaaaaaaa ggaaaccaa aataaaccaa aagaaaccga aaaccatgaa  
 900  
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 960  
 attaatatat caaacaata aagattaata agaatttga atttgatga aatggcaaag  
 1020  
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 1071

&lt;210&gt; 4522

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4522

Met	Leu	Ala	Leu	Arg	Thr	Val	Lys	Gly	Phe	Lys	Arg	Lys	Ser	Thr	Pro
1			5					10					15		
Arg	Glu	Gly	Ser	Tyr	Met	Ser	Ser	Pro	Pro	Pro	Pro	Pro	Pro	Pro	Gly
			20					25					30		
His	Thr	Glu	Thr	Ala	Ser	Ser	Phe	Gln	Pro	Ser	Pro	Phe	Ser	Ala	Asp
			35				40					45			
Phe	Glu	Leu	Gln	Ile	Ser	Leu	Leu	Tyr	Leu	Glu	Ser	Pro	Ile	Ser	Leu
			50			55					60				
Gln	Glu	Phe	Ala	Leu	Ser	Phe	Ile	Ile	Ile	Leu	Val	Tyr	Val	Leu	Asp
65					70					75				80	
Trp	Ala	Ala	Ile	Thr	Arg	Cys	His	Arg	Leu	Ser	Gly	Leu	Asn	Asn	Lys
				85				90					95		
His	Ser	Tyr	Pro	Thr	Val	Thr	Glu	Ala	Glu	Lys	Pro	Gly	Val	Lys	Val
			100					105				110			
Pro	Ala	Trp	Ser	Asp	Ser	Val	Leu	Glu	Ala	Gly	Lys	Ser	Lys	Met	Glu
			115				120					125			
Ala	Leu	Val	Gly	Leu	Val	Ser	Gly	Arg	Ala	Ser	Leu	Cys	Phe	Gln	Asp

	130		135		140	
Gly	Ala	Leu	Ser	Leu	His	Leu
145				150		155
Gln	His	Arg	Arg	Asn	Thr	Ser
				165		170
Asn	Lys	Glu	Met	Glu	Tyr	Ile
				180		185

<210> 4523  
 <211> 1022  
 <212> DNA  
 <213> Homo sapiens

<400> 4523  
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 120  
 cgtgccagcg aggctgtcct ctgggaggca ctacgcaaga tgggactgag ccctgggggtg  
 180  
 aggcacccat tcctcggcga tctgaggaag ctcacacag atgactttgt gaagcagaag  
 240  
 tacctggaat acaagaagat cccaacagc aaccacctg agtatgaatt cctctggggc  
 300  
 ctgagagccc gccatgagac cagcaagatg agggctcctga gattcatcgc ccagaatcag  
 360  
 aaccgagacc cccgggaatg gaaggctcat ttcttgaggg ctgtggatga tgctttcaag  
 420  
 acaatggatg tggatatggc cgaggaacat gccaggggccc agatgagggc ccagatgaat  
 480  
 atcggggatg aagcgctgat tggacgggtg agctgggatg acatacaagt cgagctcctg  
 540  
 acctgggatg aggacggaga ttttggegat gcctgggcca ggatcccctt tgctttctgg  
 600  
 gccagatacc atcagtacat tctgaatagc aaccgtgcca acaggagggc cacgtggaga  
 660  
 gctggcgta gcagtggcac caatggaggg gccagcacca gcgtcctaga tggccccagc  
 720  
 accagctcca ccacccggac cagaaatgct gccagagctg gcgccagctt cttctcctgg  
 780  
 atccagtagg agtttcggca ccgttgacga actgcagcga tcttactggc caagccagag  
 840  
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 900  
 aggtggcatg caagatgaag ctctctttgc tcttctgct ttcattttgt gcttttctt  
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 1020  
 aa  
 1022

<210> 4524  
 <211> 262  
 <212> PRT



&lt;213&gt; Homo sapiens

&lt;400&gt; 4524

Ala Leu Tyr Ile Leu Val Cys Thr Arg Asp Ser Ser Ala Arg Leu Leu  
 1 5 10 15  
 Gly Lys Thr Lys Asp Thr Pro Arg Leu Ser Leu Xaa Leu Val Ile Leu  
 20 25 30  
 Gly Val Ile Phe Met Asn Gly Asn Arg Ala Ser Glu Ala Val Leu Trp  
 35 40 45  
 Glu Ala Leu Arg Lys Met Gly Leu Arg Pro Gly Val Arg His Pro Phe  
 50 55 60  
 Leu Gly Asp Leu Arg Lys Leu Ile Thr Asp Asp Phe Val Lys Gln Lys  
 65 70 75 80  
 Tyr Leu Glu Tyr Lys Lys Ile Pro Asn Ser Asn Pro Pro Glu Tyr Glu  
 85 90 95  
 Phe Leu Trp Gly Leu Arg Ala Arg His Glu Thr Ser Lys Met Arg Val  
 100 105 110  
 Leu Arg Phe Ile Ala Gln Asn Gln Asn Arg Asp Pro Arg Glu Trp Lys  
 115 120 125  
 Ala His Phe Leu Glu Ala Val Asp Asp Ala Phe Lys Thr Met Asp Val  
 130 135 140  
 Asp Met Ala Glu Glu His Ala Arg Ala Gln Met Arg Ala Gln Met Asn  
 145 150 155 160  
 Ile Gly Asp Glu Ala Leu Ile Gly Arg Trp Ser Trp Asp Asp Ile Gln  
 165 170 175  
 Val Glu Leu Leu Thr Trp Asp Glu Asp Gly Asp Phe Gly Asp Ala Trp  
 180 185 190  
 Ala Arg Ile Pro Phe Ala Phe Trp Ala Arg Tyr His Gln Tyr Ile Leu  
 195 200 205  
 Asn Ser Asn Arg Ala Asn Arg Arg Ala Thr Trp Arg Ala Gly Val Ser  
 210 215 220  
 Ser Gly Thr Asn Gly Gly Ala Ser Thr Ser Val Leu Asp Gly Pro Ser  
 225 230 235 240  
 Thr Ser Ser Thr Ile Arg Thr Arg Asn Ala Ala Arg Ala Gly Ala Ser  
 245 250 255  
 Phe Phe Ser Trp Ile Gln  
 260

&lt;210&gt; 4525

&lt;211&gt; 1731

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4525

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 60  
 gtgagtacag aggtggtcag agcccaagaa gaatgggaag ctgtggacac catccagcca  
 120  
 gagacagggga gccaaactag ctcagagcag cctgggcagc taatctcctt cagtgaggcc  
 180  
 ctgcagcact tccagactgt ggacctttcc cccttcaaga aaagaatcca gccaaactatt  
 240  
 cgaaggactg ggctcgccgc cctccgacac tacctcttcg ggcctccaaa gctccaccag  
 300

cgccctcggg aagaaaggga cttggtcctg accattgctc agtgtggcct ggatagccaa  
360  
gaccagtgac atggccgagt cctccagacc atctataaga agctgaccgg ctccaagttt  
420  
gactgtgccc ttcattgaaa ccaactgggag gacctgggct ttcagggagc gaatccagcc  
480  
acagacctga gaggcgcagg ctcccttgcc ctctgcacg tgctctacct agtgatggac  
540  
tcaaagacct tgccgatggc gcaggagatt ttccgctgtc ctctcacca catccagcaa  
600  
ttccctttct gttgatgtc cgtgaacac acccattg ccattccaggc cttgagagag  
660  
gagtgtctct ccagagagt taatcggcag cagaaggta tccccgtggg gaacagcttc  
720  
tatgccgcca cattctcca cctcgcacat gtctggagga cacagcgaa gacctctca  
780  
gactcgggct ttgtcctcaa aggtgtgctc tttctctgg ggaggcctag gctgaatgca  
840  
cagtgtccca ggtccagaga gcccaagggt gttgctagac tggttttggc tgcagttctt  
900  
ccccatccac actttctcaa attccagctt accaaaatct ccattcccca cccctggag  
960  
tctgctagtt ctctttctc tgccctgact gtcgccctt tctggtctta tacttatgac  
1020  
aagcatatat tctgatcaaa aattgggagc cagggtccaa tagttggact attcaaagtt  
1080  
gcaattgtgc agacaaggta gagtgtgtgg tccctgtggc tgtagctggc tccctagcct  
1140  
acctctctgg tgatctctcc atctgaggt ccttcacttt ctctccatgg gataggggtt  
1200  
gggggtactc cctagagctg ctaggcttga ggccttgact gttgtgtcac ccagagcccc  
1260  
ctcaagcctt ctgctcccca attctctctg ttgcagagtt ggaagtattg gccagaaga  
1320  
gccacggcg ggctgtcaa gacctggag ctgtacttgg ccagggtgtc aaaggacag  
1380  
gcctccttgt tgggagcaca gaagtgtat gggccagaag cccctccctt caaggatctc  
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1560  
gcatgtcag gagcctggcc aggcgcacc ccttgcgtgc tcagcagatg ggatatagga  
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agctcctggg cttagctgtg ggaagccaag taccctcacc ggcattgggac atgaggggca  
1680  
gctagacttc accccttcc cgcagacctg cctccagagc aaggagaatt c  
1731

&lt;210&gt; 4526

&lt;211&gt; 344

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4526

```

Xaa Asn His Gly Ile Leu Gln Ala Leu Thr Thr Glu Ala Tyr Glu Trp
 1           5           10           15
Glu Pro Arg Val Val Ser Thr Glu Val Val Arg Ala Gln Glu Glu Trp
          20           25           30
Glu Ala Val Asp Thr Ile Gln Pro Glu Thr Gly Ser Gln Ala Ser Ser
          35           40           45
Glu Gln Pro Gly Gln Leu Ile Ser Phe Ser Glu Ala Leu Gln His Phe
          50           55           60
Gln Thr Val Asp Leu Ser Pro Phe Lys Lys Arg Ile Gln Pro Thr Ile
          65           70           75           80
Arg Arg Thr Gly Leu Ala Ala Leu Arg His Tyr Leu Phe Gly Pro Pro
          85           90           95
Lys Leu His Gln Arg Leu Arg Glu Glu Arg Asp Leu Val Leu Thr Ile
          100          105          110
Ala Gln Cys Gly Leu Asp Ser Gln Asp Pro Val His Gly Arg Val Leu
          115          120          125
Gln Thr Ile Tyr Lys Lys Leu Thr Gly Ser Lys Phe Asp Cys Ala Leu
          130          135          140
His Gly Asn His Trp Glu Asp Leu Gly Phe Gln Gly Ala Asn Pro Ala
          145          150          155          160
Thr Asp Leu Arg Gly Ala Gly Phe Leu Ala Leu Leu His Leu Leu Tyr
          165          170          175
Leu Val Met Asp Ser Lys Thr Leu Pro Met Ala Gln Glu Ile Phe Arg
          180          185          190
Leu Ser Arg His His Ile Gln Gln Phe Pro Phe Cys Leu Met Ser Val
          195          200          205
Asn Ile Thr His Ile Ala Ile Gln Ala Leu Arg Glu Glu Cys Leu Ser
          210          215          220
Arg Glu Cys Asn Arg Gln Gln Lys Val Ile Pro Val Val Asn Ser Phe
          225          230          235          240
Tyr Ala Ala Thr Phe Leu His Leu Ala His Val Trp Arg Thr Gln Arg
          245          250          255
Lys Thr Ile Ser Asp Ser Gly Phe Val Leu Lys Gly Val Leu Phe Leu
          260          265          270
Leu Gly Arg Pro Arg Leu Asn Ala Gln Cys Pro Arg Ser Arg Glu Pro
          275          280          285
Lys Val Val Ala Arg Leu Val Leu Ala Ala Val Leu Pro His Pro His
          290          295          300
Phe Leu Lys Phe Gln Leu Thr Lys Ile Ser Ile Thr His Pro Leu Glu
          305          310          315          320
Ser Ala Ser Ser Pro Phe Ser Ala Leu Thr Val Ala Leu Phe Trp Ser
          325          330          335
Tyr Thr Tyr Asp Lys His Ile Phe
          340

```

&lt;210&gt; 4527

&lt;211&gt; 885

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4527

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nntttttttt tttttttttt tttttttttt tttttttttt tttttttttg cagagacatg
60

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gctgcattta ttgttcccag cccggcgaga aggtgttccc agaaaggttc cttgggtcac  
 120  
 ctgcccaccc agccttggtc ctgggtgcc atgtcccac gggggcagga gagaggcaca  
 180  
 agtcacagtc aggcaaggga gcctcagcgt cctgggcggt ggctgttggg gtccctccag  
 240  
 tcttcacctg ggaccctcgg ccaggctggg acagcatcca ggaggcgagg ctgcatggtc  
 300  
 cagcgggtggg tgcaggtggc aacaggtcgg cgggctgtgc aggttccaaa aggagctctc  
 360  
 ggggttggcac tgggtgagac cagccccggg gccagcaggg gaatgagcgg tggagcaggg  
 420  
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 540  
 tgtccagcga ggccatctcc gtggggctct cagtgttggc gaggaggccg tatcgctcc  
 600  
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 660  
 agcccaggat cacgtagaag gagcgcgta gcgccgagcc cgacgcccc ggcggaacgcg  
 720  
 tgtgcgtgct gttgtgtggc gcgccggct ggctccggtt cgtcacggcc ggcgggggcg  
 780  
 acaacgtgac ctggcggggg cagcgcgag cctcttcggc accgcacggc agcgccgcca  
 840  
 gcagcagcg cagcaggagc agcagcagcg gcggctgcag cacgc  
 885

&lt;210&gt; 4528

&lt;211&gt; 206

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4528

Xaa	Phe	Phe	Phe	Phe	Phe	Phe	Phe	Phe	Phe	Phe	Phe	Phe	Phe	Phe	Phe
1				5				10					15		
Cys	Arg	Asp	Met	Ala	Ala	Phe	Ile	Val	Pro	Ser	Pro	Ala	Arg	Arg	Cys
			20					25					30		
Ser	Gln	Lys	Gly	Ser	Leu	Gly	His	Leu	Pro	Thr	Gln	Pro	Trp	Leu	Trp
		35					40					45			
Ala	Ala	Met	Ser	Pro	Arg	Gly	Gln	Glu	Arg	Gly	Thr	Ser	His	Ser	Gln
		50					55				60				
Ala	Arg	Glu	Pro	Gln	Arg	Pro	Gly	Arg	Trp	Leu	Leu	Gly	Ser	Leu	Gln
65					70				75					80	
Ser	Ser	Pro	Gly	Thr	Leu	Gly	Gln	Ala	Gly	Thr	Ala	Ser	Arg	Arg	Arg
				85				90					95		
Gly	Cys	Met	Val	Gln	Arg	Trp	Val	Gln	Val	Ala	Thr	Gly	Arg	Arg	Ala
			100					105					110		
Val	Gln	Val	Pro	Lys	Gly	Ala	Leu	Gly	Leu	Ala	Leu	Gly	Glu	Thr	Ser
		115					120					125			
Pro	Gly	Ala	Ser	Arg	Gly	Met	Ser	Gly	Gly	Ala	Gly	Gly	Cys	Trp	Ala
		130				135					140				
Leu	Gly	Trp	Ala	Pro	Ser	Pro	Val	Leu	Pro	Ser	Trp	Leu	Leu	Glu	Gly

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145          150          155          160
Pro Pro Pro Trp Leu Ser Ile Ile Ser Asp Ser Gly Thr Gln Thr Pro
          165          170          175
Ser Pro Arg Arg Cys Pro Ala Arg Pro Ser Pro Trp Gly Pro Gln Cys
          180          185          190
Trp Arg Gly Gly Arg Ile Ala Ser Ala Glu Ala Ser Ser Thr
          195          200          205

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<210> 4529  
 <211> 546  
 <212> DNA  
 <213> Homo sapiens

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<400> 4529
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gtggccgccc cctaagctgc agccgccgga gccgcagaaa caagaggccg agccgtgtcg
120
aagatggagg agaaacctc agggcccatc ccggacatgc tggccactgc agagcccagc
180
tccagtgaga ccgacaagga ggtgtgtcc ccggtgtgc cagctgcagc cccctcctcc
240
tccatgtcgg aggagccagg ccctgagcag gcagccacac cgccagtggg gaacgtggag
300
gggctggagg gatgcagcag ggctcctccc cagccccaga cagctgccag tctggccccg
360
gaccagccc tggcctgacc agcatagtct ccgggaccag cgaggacctg cggcctccca
420
gacgagccc acctccaggg aagcaaatcc cttgctccag ccctggctgc tgcctcagtt
480
ttcccagcgt ccgtgacctg gcacagcatc tgcgaacca ctgcccgcg agccctatgc
540
agtctc
546

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<210> 4530  
 <211> 84  
 <212> PRT  
 <213> Homo sapiens

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<400> 4530
Met Glu Glu Lys Pro Ser Gly Pro Ile Pro Asp Met Leu Ala Thr Ala
1          5          10          15
Glu Pro Ser Ser Ser Glu Thr Asp Lys Glu Val Leu Ser Pro Ala Val
20          25          30
Pro Ala Ala Ala Pro Ser Ser Ser Met Ser Glu Glu Pro Gly Pro Glu
35          40          45
Gln Ala Ala Thr Pro Pro Val Gly Asn Val Glu Gly Leu Glu Gly Cys
50          55          60
Ser Arg Ala Pro Pro Gln Pro Gln Thr Ala Ala Ser Leu Ala Pro Asp
65          70          75          80
Pro Ala Leu Ala

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<210> 4531  
<211> 1414  
<212> DNA  
<213> Homo sapiens

<400> 4531  
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60  
gccgggtccct tgcagggcgg tggggcccgg gccctggacc tactccgggg cctgccgcgt  
120  
gtgagcctgg ccaacttaaa gccgaatccc ggctccaaga aaccggagag aagaccaaga  
180  
ggtcggagaa gaggtagaaa atgtggcaga ggccataaag gagaaaggca aagaggaacc  
240  
cggccccgct tgggctttga gggaggccag actccathtt acatccgaat cccaaaatac  
300  
gggtttaacg aaggacatag tttcagacgc cagtataagc ctttgagtct caatagactg  
360  
cagtatctta ttgatttggg tcgtgttgat cctagtcaac ctattgactt aaccagctt  
420  
gtcaatggga gaggtgtgac catccagcca cttaaaaggg attatggtgt ccagctggtt  
480  
gaggagggtg ctgacacctt tacggcaaaa gttaatatg aagtacagtt ggcttcagaa  
540  
ctagctattg ctgccattga aaaaaatggt ggtgttggtta ctacagcctt ctatgatcca  
600  
agaagtctgg acattgtatg caaacctggt ccattctttc ttcgtggaca acccattcca  
660  
aaaagaatgc ttccaccaga agaactggta ccatattaca ctgatgcaa gaaccgtggg  
720  
tacctggcgg atcctgccaa atttcctgaa gcacgacttg aactcgccag gaagtatggt  
780  
tatatcttac ctgatcac taaagatgaa ctcttcaaaa tgctctgtac taggaaggat  
840  
ccaaggcaga ttttctttgg tcttgctcca ggatgggtgg tgaatatggc cgataagaaa  
900  
atcctaaaaac ctacagatga aaatctcctt aagtattata cctcatgaat tcccgtccaa  
960  
ggaagcagag ttgttaaaga gtactggaat aggggctgaa ggatctatat tcccttattg  
1020  
cattttcctt atgtataatt ttccagatgg tgatgttact tttcagtgt ctcatatgtc  
1080  
tcattttcat ctaaaattaa atggcaggaa acaaggactg catagagaaa ctgagtctgt  
1140  
gtgggttctg tctcaaagat acaaactccc tgatagtcta tggaaggaaa atgacaacta  
1200  
ttttagaata tttctagttt gttttttcag tgatcttttc atccaggcct tgttactgtt  
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1320  
atgagagcag atggaatgag ttggtgaccc ctcttaatct gtagcctcag ggaaacacgg  
1380  
ctacccaatg ccaagatggt aaacctcac gcgt  
1414

<210> 4532  
 <211> 296  
 <212> PRT  
 <213> Homo sapiens

<400> 4532  
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 Arg Gly Leu Pro Arg Val Ser Leu Ala Asn Leu Lys Pro Asn Pro Gly  
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 Ser Lys Lys Pro Glu Arg Arg Pro Arg Gly Arg Arg Gly Arg Lys  
 35 40 45  
 Cys Gly Arg Gly His Lys Gly Glu Arg Gln Arg Gly Thr Arg Pro Arg  
 50 55 60  
 Leu Gly Phe Glu Gly Gly Gln Thr Pro Phe Tyr Ile Arg Ile Pro Lys  
 65 70 75 80  
 Tyr Gly Phe Asn Glu Gly His Ser Phe Arg Gln Tyr Lys Pro Leu  
 85 90 95  
 Ser Leu Asn Arg Leu Gln Tyr Leu Ile Asp Leu Gly Arg Val Asp Pro  
 100 105 110  
 Ser Gln Pro Ile Asp Leu Thr Gln Leu Val Asn Gly Arg Gly Val Thr  
 115 120 125  
 Ile Gln Pro Leu Lys Arg Asp Tyr Gly Val Gln Leu Val Glu Glu Gly  
 130 135 140  
 Ala Asp Thr Phe Thr Ala Lys Val Asn Ile Glu Val Gln Leu Ala Ser  
 145 150 155 160  
 Glu Leu Ala Ile Ala Ala Ile Glu Lys Asn Gly Gly Val Val Thr Thr  
 165 170 175  
 Ala Phe Tyr Asp Pro Arg Ser Leu Asp Ile Val Cys Lys Pro Val Pro  
 180 185 190  
 Phe Phe Leu Arg Gly Gln Pro Ile Pro Lys Arg Met Leu Pro Pro Glu  
 195 200 205  
 Glu Leu Val Pro Tyr Tyr Thr Asp Ala Lys Asn Arg Gly Tyr Leu Ala  
 210 215 220  
 Asp Pro Ala Lys Phe Pro Glu Ala Arg Leu Glu Leu Ala Arg Lys Tyr  
 225 230 235 240  
 Gly Tyr Ile Leu Pro Asp Ile Thr Lys Asp Glu Leu Phe Lys Met Leu  
 245 250 255  
 Cys Thr Arg Lys Asp Pro Arg Gln Ile Phe Phe Gly Leu Ala Pro Gly  
 260 265 270  
 Trp Val Val Asn Met Ala Asp Lys Lys Ile Leu Lys Pro Thr Asp Glu  
 275 280 285  
 Asn Leu Leu Lys Tyr Tyr Thr Ser  
 290 295

<210> 4533  
 <211> 968  
 <212> DNA  
 <213> Homo sapiens

<400> 4533  
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 120  
 gcgcggcggc cccgcgcagc catggactgg ctcatgggga agtccaaagc caagcccaat  
 180  
 ggcaagaagc ccgctgcgga ggagaggaag gcctacctgg agcctgagca caccaaggcc  
 240  
 aggatcaccg acttccagtt caaggagctg gtggtgctgc cccgggagat cgacctcaac  
 300  
 gagtggctgg ccagcaacac aacaacattt ttccaccaca tcaacctgca gtatagcaca  
 360  
 atctcggagt tctgcacagg agagacgtgt cagacgatgg ccgtgtgcaa cacacgtac  
 420  
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&lt;210&gt; 4534

&lt;211&gt; 284

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4534

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		20						25				30			
Glu	Ala	Asp	Arg	Val	Gly	Gln	Arg	Ala	Arg	Arg	Pro	Arg	Ala	Ala	Met
		35					40					45			
Asp	Trp	Leu	Met	Gly	Lys	Ser	Lys	Ala	Lys	Pro	Asn	Gly	Lys	Lys	Pro
	50					55					60				
Ala	Ala	Glu	Glu	Arg	Lys	Ala	Tyr	Leu	Glu	Pro	Glu	His	Thr	Lys	Ala
65				70					75					80	
Arg	Ile	Thr	Asp	Phe	Gln	Phe	Lys	Glu	Leu	Val	Val	Leu	Pro	Arg	Glu
			85					90				95			
Ile	Asp	Leu	Asn	Glu	Trp	Leu	Ala	Ser	Asn	Thr	Thr	Thr	Phe	Phe	His
		100					105						110		
His	Ile	Asn	Leu	Gln	Tyr	Ser	Thr	Ile	Ser	Glu	Phe	Cys	Thr	Gly	Glu



```

      115              120              125
Thr Cys Gln Thr Met Ala Val Cys Asn Thr Gln Tyr Tyr Trp Tyr Asp
      130              135              140
Glu Arg Gly Lys Lys Val Lys Cys Thr Ala Pro Gln Tyr Val Asp Phe
145              150              155              160
Val Met Ser Ser Val Gln Lys Leu Val Thr Asp Glu Asp Val Phe Pro
      165              170              175
Thr Lys Tyr Gly Arg Glu Phe Pro Ser Ser Phe Glu Ser Leu Val Arg
      180              185              190
Lys Ile Cys Arg His Leu Phe His Val Leu Ala His Ile Tyr Trp Ala
      195              200              205
His Phe Lys Glu Thr Leu Ala Leu Glu Leu His Gly His Leu Asn Thr
      210              215              220
Leu Tyr Val His Phe Ile Leu Phe Ala Arg Glu Phe Asn Leu Leu Asp
225              230              235              240
Pro Lys Glu Thr Ala Ile Met Asp Asp Leu Thr Glu Val Leu Cys Ser
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Gly Ala Gly Gly Val His Ser Gly Gly Ser Gly Asp Gly Ala Gly Ser
      260              265              270
Gly Gly Pro Gly Ala Gln Asn His Val Lys Glu Arg
      275              280

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<210> 4535  
 <211> 473  
 <212> DNA  
 <213> Homo sapiens

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300
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360
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473

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<210> 4536  
 <211> 75  
 <212> PRT  
 <213> Homo sapiens

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<400> 4536
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Gln Ala Gly Val Gln Trp His Asp His Ser Ser Leu Gln Pro Leu Pro

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	20		25		30										
Pro	Arg	Phe	Lys	Gln	Phe	Ser	Xaa	Leu	Ser	Leu	Pro	Ser	Ser	Trp	Asp
	35		40		45										
Tyr	Arg	Arg	Pro	Pro	Pro	Arg	Pro	Ala	Asn	Phe	Cys	Ile	Phe	Ser	Arg
	50		55		60										
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<210> 4537  
 <211> 2811  
 <212> DNA  
 <213> Homo sapiens

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<210> 4538  
 <211> 437  
 <212> PRT  
 <213> Homo sapiens

<400> 4538  
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 Glu Val Phe Val Pro Val Leu Asn Ile Lys Arg Ser Glu Leu Pro Leu  
 35 40 45  
 Arg Gly Asp Ile Val Phe Phe Leu Gln Lys Val His Ile Pro Glu Ser  
 50 55 60  
 Ile Leu Ile Phe Arg Asp Glu Ile Asp Leu His Ala Leu Tyr Gln Ala  
 65 70 75 80  
 Gly Gln Leu Thr Leu Ile Leu Val Asp His His Ile Leu Ser Lys Ser  
 85 90 95  
 Asp Thr Ala Leu Glu Glu Xaa Ser Ser Arg Gly Ala Arg Pro Ser Thr  
 100 105 110  
 His Arg Ala Glu Thr Leu Pro Ser Leu Xaa His Val Ser Val Glu Leu  
 115 120 125  
 Val Gly Ser Cys Ala Thr Leu Val Thr Glu Arg Ile Leu Gln Gly Ala  
 130 135 140  
 Pro Glu Ile Leu Asp Arg Gln Thr Ala Ala Leu Leu His Gly Thr Ile  
 145 150 155 160  
 Ile Leu Asp Cys Val Asn Met Asp Leu Lys Ile Gly Lys Ala Thr Pro  
 165 170 175  
 Lys Asp Ser Lys Tyr Val Glu Lys Leu Glu Ala Leu Phe Pro Asp Leu  
 180 185 190  
 Pro Lys Arg Asn Asp Ile Phe Asp Ser Leu Gln Lys Ala Lys Phe Asp  
 195 200 205  
 Val Ser Gly Leu Thr Thr Glu Gln Met Leu Arg Lys Asp Gln Lys Thr  
 210 215 220  
 Ile Tyr Arg Gln Gly Val Lys Val Ala Ile Ser Ala Ile Tyr Met Asp  
 225 230 235 240  
 Leu Glu Ala Phe Leu Gln Arg Ser Asn Leu Leu Ala Asp Leu His Ala  
 245 250 255  
 Phe Cys Gln Ala His Ser Tyr Asp Val Leu Val Ala Met Thr Ile Phe  
 260 265 270  
 Phe Asn Thr His Asn Glu Pro Val Arg Gln Leu Ala Ile Phe Cys Pro  
 275 280 285  
 His Val Ala Leu Gln Thr Thr Ile Cys Glu Val Leu Glu Arg Ser His  
 290 295 300  
 Ser Pro Pro Leu Lys Leu Thr Pro Ala Ser Ser Thr His Pro Asn Leu  
 305 310 315 320  
 His Ala Tyr Leu Gln Gly Asn Thr Gln Val Ser Arg Lys Lys Leu Leu  
 325 330 335  
 Pro Leu Leu Gln Glu Ala Leu Ser Ala Tyr Phe Asp Ser Met Lys Ile  
 340 345 350  
 Pro Ser Gly Gln Pro Glu Thr Ala Asp Val Ser Arg Glu Gln Val Asp  
 355 360 365  
 Lys Glu Leu Asp Arg Ala Ser Asn Ser Leu Ile Ser Gly Leu Ser Gln

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      370              375              380
Asp Glu Glu Asp Pro Pro Leu Pro Pro Thr Pro Met Asn Ser Leu Val
385              390              395              400
Asp Glu Cys Pro Leu Asp Gln Gly Leu Pro Lys Leu Ser Ala Glu Ala
      405              410              415
Val Phe Glu Lys Cys Ser Gln Ile Ser Leu Ser Gln Ser Thr Thr Ala
      420              425              430
Ser Leu Ser Lys Lys
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&lt;210&gt; 4539

&lt;211&gt; 331

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4539

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300
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331

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&lt;210&gt; 4540

&lt;211&gt; 99

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4540

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Met Gly Ala Leu Phe Leu Leu Ser Trp Met Gly Trp Thr Pro Arg Lys
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Thr Arg Ser Leu Gly Glu Asn Gln Arg Val Ile Asn Glu Leu Thr Trp
      20      25      30
Lys Leu Gln Gln Glu Gln Arg Gln Val Glu Glu Leu Arg Met Gln Leu
      35      40      45
Gln Lys Gln Lys Arg Asn Asn Cys Ser Glu Lys Lys Pro Leu Pro Phe
      50      55      60
Leu Ala Ala Ser Ile Lys Gln Glu Glu Ala Val Ser Ser Cys Pro Phe
      65      70      75      80
Ala Ser Gln Val Pro Val Lys Arg Gln Ser Ser Ser Ser Lys Cys His
      85      90      95
Pro Pro Ala

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&lt;210&gt; 4541

&lt;211&gt; 452

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

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 452

<210> 4542

<211> 128

<212> PRT

<213> Homo sapiens

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 20 25 30  
 Ser Leu Trp Ile Cys Val Gln Ile Val Ile Lys Thr Gln Gly Lys Asn  
 35 40 45  
 Leu Gln Glu Lys Ser Val Pro Lys Ala Ala Gln Asp Leu Met Thr Asn  
 50 55 60  
 Gly Tyr Val Ser Leu Gln Glu Lys Asp Ile Phe Val Ser Gly Val Lys  
 65 70 75 80  
 Ile Phe Tyr Gly Ser Gln Thr Gly Thr Ala Lys Gly Phe Ala Thr Val  
 85 90 95  
 Leu Ala Glu Ala Val Thr Ser Leu Asp Leu Pro Val Ala Ile Ile Asn  
 100 105 110  
 Leu Lys Glu Tyr Asp Pro Asp Asp His Leu Ile Glu Glu Val Thr Ser  
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<210> 4543

<211> 815

<212> DNA

<213> Homo sapiens

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 120  
 gaggccccgc gcaccaatgc tttgcacttt gcctcgcgcc acaccctgcg ggccagagct  
 180

cctctgccgc ccaccgggct aacccttccg ggcctcacca ctcccagtg gctctgctta  
 240  
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 300  
 gggctttcca ctgggtgcct cccagacga ttgcttgtaa tgggccagtg cctcgccagg  
 360  
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 420  
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 480  
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 815

<210> 4544

<211> 150

<212> PRT

<213> Homo sapiens

<400> 4544

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Gln	Ser	Glu	Pro	Ser	Ala	Leu	Pro	Gly	Leu	Asp	Leu	Phe	Leu	Asn	Ser
			20					25					30		
His	Lys	Leu	Gln	Gly	Ala	Ala	Ala	Val	Ser	Leu	Ala	Arg	His	Trp	Pro
			35				40					45			
Ile	Thr	Ser	Asn	Arg	Leu	Gly	Arg	Ala	Pro	Val	Glu	Ser	Pro	Val	Pro
			50			55					60				
Ser	His	Phe	Arg	Arg	Val	Ala	Leu	Leu	Pro	Arg	Ser	Arg	Ser	Gln	Trp
65					70					75				80	
Pro	Asp	Lys	Gln	Ser	His	Ser	Gly	Val	Val	Arg	Pro	Gly	Arg	Val	Ser
				85					90					95	
Pro	Val	Gly	Gly	Arg	Gly	Ala	Leu	Ala	Arg	Arg	Val	Ser	Gly	Glu	Ala
			100					105					110		
Lys	Cys	Lys	Ala	Leu	Val	Arg	Gly	Ala	Ser	Gly	Ser	His	Gly	Gly	Ala
			115					120				125			
Ala	Gly	Gln	Gly	Pro	Ala	Val	Thr	Arg	Ser	Pro	Ser	Ser	Leu	Cys	Leu
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Ala	Leu	Val	Ser	Thr	Gly										
145					150										

<210> 4545

<211> 3568

<212> DNA

<213> Homo sapiens

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1560



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&lt;210&gt; 4546

&lt;211&gt; 380

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4546

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 Phe Tyr Asp Ser Gln Thr Trp Glu Asn Ile Leu Lys Asp Arg Met Gly  
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 Ser Ala Leu Met Ile Glu Thr Ala Arg Asn Pro Thr Cys Pro Lys Val  
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&lt;210&gt; 4548

&lt;211&gt; 515

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4548

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Cys	Ser	Thr	Thr	Ala	Leu	Lys	Lys	Tyr	Val	Leu	Glu	Asn	His	Pro	Gly
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Thr	Asn	Ser	Asn	Tyr	Gln	Met	His	Leu	Leu	Lys	Lys	Thr	Leu	Gln	Lys
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Cys	Glu	Lys	Asn	Gly	Trp	Met	Glu	Gln	Ile	Ser	Gly	Lys	Gly	Phe	Ser
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<211> 2927  
<212> DNA  
<213> Homo sapiens

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 <212> PRT  
 <213> Homo sapiens

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 Tyr Lys Pro Gln Asp Val Pro Ala Lys Ala Arg Ser Thr Ser Leu Asn  
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[illegible]

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Leu Trp Ile Ser Arg Asp Thr Ala Gly Pro Ala Ser Phe Ser Asp His
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Thr Ile Leu Leu Ser Leu Gly Phe Tyr Ala Ile Met Thr Thr Thr Thr
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&lt;210&gt; 4551

&lt;211&gt; 361

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4551

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361

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&lt;210&gt; 4552

&lt;211&gt; 100

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4552

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35      40      45
Cys Ser Gln Gln Gly Arg Gln Gly Arg Ala Pro Arg Arg Asp Pro Thr
50      55      60
Gln Arg Thr Trp Glu Ser Gly Cys Gln Arg Trp Ala Ala Gly Arg Ala

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&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4553

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<211> 705

<212> PRT

<213> Homo sapiens

<400> 4554

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Ser Tyr Val Arg Asn Tyr Leu Gln Lys Pro Thr Phe Ala Leu Gly Glu
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Leu Tyr Pro Pro Leu Ile Asn Leu Trp Glu Ala Gly Lys Glu Lys Ser
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Ser
705

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&lt;210&gt; 4555

&lt;211&gt; 1128

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4555

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<212> PRT

<213> Homo sapiens

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<210> 4559  
 <211> 919



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4559

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&lt;210&gt; 4560

&lt;211&gt; 126

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4560

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&lt;210&gt; 4562

&lt;211&gt; 1182

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4562

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 Ala Gln Asn His Pro Ile Tyr Leu Ala Thr Gly Thr Ser Ala Gln Gln

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      20      25      30
Leu Asp Ala Thr Phe Ser Thr Asn Ala Ser Leu Glu Ile Phe Glu Leu
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Asp Leu Ser Asp Pro Ser Leu Asp Met Lys Ser Cys Ala Thr Phe Ser
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Ser Ser His Arg Tyr His Lys Leu Ile Trp Gly Pro Tyr Lys Met Asp
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Ser Lys Gly Asp Val Ser Gly Val Leu Ile Ala Gly Gly Glu Asn Gly
      85      90      95
Asn Ile Ile Leu Tyr Asp Pro Ser Lys Ile Ile Ala Gly Asp Lys Glu
      100      105      110
Val Val Ile Ala Gln Asn Asp Lys His Thr Gly Pro Val Arg Ala Leu
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Asp Val Asn Ile Phe Gln Thr Asn Leu Val Ala Ser Gly Ala Asn Glu
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Ser Glu Ile Tyr Ile Trp Asp Leu Asn Asn Phe Ala Thr Pro Met Thr
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Pro Gly Ala Lys Thr Gln Pro Pro Glu Asp Ile Ser Cys Ile Ala Trp
      165      170      175
Asn Arg Gln Val Gln His Ile Leu Ala Ser Ala Ser Pro Ser Gly Arg
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Ala Thr Val Trp Asp Leu Arg Glu Asn Glu Pro Ile Ile Lys Val Ser
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Asp His Ser Asn Arg Met His Cys Ser Gly Leu Ala Trp His Pro Asp
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Val Ala Thr Gln Met Val Leu Ala Ser Glu Asp Asp Arg Leu Pro Val
      225      230      235      240
Ile Gln Met Trp Asp Leu Arg Phe Ala Ser Ser Pro Leu Arg Val Leu
      245      250      255
Glu Asn His Ala Arg Gly Ile Leu Ala Ile Ala Trp Ser Met Ala Asp
      260      265      270
Pro Glu Leu Leu Ser Cys Gly Lys Asp Ala Lys Ile Leu Cys Ser
      275      280      285
Asn Pro Asn Thr Gly Glu Val Leu Tyr Glu Leu Pro Thr Asn Thr Gln
      290      295      300
Trp Cys Phe Asp Ile Gln Trp Cys Pro Arg Asn Pro Ala Val Leu Ser
      305      310      315      320
Ala Ala Ser Phe Asp Gly Arg Ile Ser Val Tyr Ser Ile Met Gly Gly
      325      330      335
Ser Thr Asp Gly Leu Arg Gln Lys Gln Val Asp Lys Leu Ser Ser Ser
      340      345      350
Phe Gly Asn Leu Asp Pro Phe Gly Thr Gly Gln Pro Leu Pro Pro Leu
      355      360      365
Gln Ile Pro Gln Gln Thr Ala Gln His Ser Ile Val Leu Pro Leu Lys
      370      375      380
Lys Pro Pro Lys Trp Ile Arg Arg Pro Val Gly Ala Ser Phe Ser Phe
      385      390      395      400
Gly Gly Lys Leu Val Thr Phe Glu Asn Val Arg Met Pro Ser His Gln
      405      410      415
Gly Ala Glu Gln Gln Gln Gln His Val Phe Ile Ser Gln Val
      420      425      430
Val Thr Glu Lys Glu Phe Leu Ser Arg Ser Asp Gln Leu Gln Gln Ala
      435      440      445
Val Gln Ser Gln Gly Phe Ile Asn Tyr Cys Gln Lys Lys Ile Asp Ala

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Ser Gln Thr Glu Phe Glu Lys Asn Val Trp Ser Phe Leu Lys Val Asn					
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Phe Glu Asp Asp Ser Arg Gly Lys Tyr Leu Glu Leu Leu Gly Tyr Arg					
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Lys Glu Asp Leu Glu Lys Xaa Gln Asp Ile Lys Glu Glu Lys Glu Glu					
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Ser Glu Phe Leu Pro Ser Ser Gly Gly Thr Phe Asn Ile Ser Val Ser					
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Gly Asp Ile Asp Gly Leu Ile Thr Gln Ala Leu Leu Thr Gly Asn Phe					
	530		535		540
Glu Ser Ala Val Asp Leu Cys Leu His Asp Asn Arg Met Ala Asp Ala					
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Ile Ile Leu Ala Ile Ala Gly Gly Gln Glu Leu Leu Ala Arg Thr Gln					
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Lys Lys Tyr Phe Ala Lys Ser Gln Ser Lys Ile Thr Arg Leu Ile Thr					
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Ala Val Val Met Lys Asn Trp Lys Glu Ile Val Glu Ser Cys Asp Leu					
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Lys Asn Trp Arg Glu Ala Leu Ala Ala Val Leu Thr Tyr Ala Lys Pro					
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Asp Glu Phe Ser Ala Leu Cys Asp Leu Leu Gly Thr Arg Leu Glu Asn					
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Glu Gly Asp Ser Leu Leu Gln Thr Gln Ala Cys Leu Cys Tyr Ile Cys					
	645		650		655
Ala Gly Asn Val Glu Lys Leu Val Ala Cys Trp Thr Lys Ala Gln Asp					
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Gly Ser His Pro Leu Ser Leu Gln Asp Leu Ile Glu Lys Val Val Ile					
	675		680		685
Leu Arg Lys Ala Val Gln Leu Thr Gln Ala Met Asp Thr Ser Thr Val					
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Gly Val Leu Leu Ala Ala Lys Met Ser Gln Tyr Ala Asn Leu Leu Ala					
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Ala Gln Gly Ser Ile Ala Ala Ala Leu Ala Phe Leu Pro Asp Asn Thr					
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Asn Gln Pro Asn Ile Met Gln Leu Arg Asp Arg Leu Cys Arg Ala Gln					
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	755		760		765
Gln Gln Leu Pro Lys Gly Arg Pro Gly Pro Val Ala Gly His His Gln					
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Met Pro Arg Val Gln Thr Gln Gln Tyr Tyr Pro His Gly Glu Asn Pro					
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Pro Pro Pro Gly Phe Ile Met His Gly Asn Val Asn Pro Asn Ala Ala					
	805		810		815
Gly Gln Leu Pro Thr Ser Pro Gly His Met His Thr Gln Val Pro Pro					
	820		825		830
Tyr Pro Gln Pro Gln Pro Tyr Gln Pro Ala Gln Pro Tyr Pro Phe Gly					
	835		840		845
Thr Gly Gly Ser Ala Met Tyr Arg Pro Gln Gln Pro Val Ala Pro Pro					
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Thr Ser Asn Ala Tyr Pro Asn Thr Pro Tyr Ile Ser Ser Ala Ser Ser					
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Tyr Thr Gly Gln Ser Gln Leu Tyr Ala Ala Gln His Gln Ala Ser Ser					

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 Pro Thr Ser Ser Pro Ala Thr Ser Phe Pro Pro Pro Pro Ser Ser Gly  
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 930 935 940  
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 Arg Ser Ile Glu Thr Arg Asn Tyr Ser Glu Gly Leu Thr Met His Thr  
 1140 1145 1150  
 His Ile Val Ser Thr Ser Asn Phe Ser Glu Thr Ser Ala Phe Met Pro  
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&lt;210&gt; 4563

&lt;211&gt; 2037

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4563

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1920



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<210> 4564

<211> 354

<212> PRT

<213> Homo sapiens

<400> 4564

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Asp	Glu	Asp	Gly	Leu	Val	Val	Leu	Val	Phe	Asn	Lys	Lys	Glu	Thr	Glu
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Ile	Arg	Ser	Gln	Gln	Gln	Gln	Leu	Val	Glu	Ser	Leu	His	Lys	Val	Leu
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Gly	Gly	Asn	Gln	Thr	Leu	Thr	Val	Asn	Val	Glu	Gly	Thr	Lys	Thr	Leu
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Pro	Asp	Asp	Gln	Thr	Glu	Val	Val	Ile	Tyr	Val	Val	Glu	Arg	Ser	Pro
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Phe	Lys	Glu	Leu	Leu	Arg	Arg	Leu	Lys	Val	Gln	Asp	Gln	Met	Thr	Lys
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Gln	His	Gln	Thr	Arg	Leu	Asp	Ile	Ile	Ser	Glu	Asp	Ile	Ser	Glu	Leu
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Gln	Lys	Asn	Gln	Thr	Thr	Ser	Val	Ala	Lys	Ile	Ala	Gln	Tyr	Lys	Arg
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Lys	Leu	Met	Asp	Leu	Ser	His	Arg	Thr	Leu	Gln	Val	Leu	Ile	Lys	Gln
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Glu	Ile	Gln	Arg	Lys	Ser	Gly	Tyr	Ala	Ile	Gln	Ala	Asp	Glu	Glu	Gln
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Leu	Arg	Val	Gln	Leu	Asp	Thr	Ile	Gln	Gly	Glu	Leu	Asn	Ala	Pro	Thr
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Gln	Phe	Lys	Gly	Arg	Leu	Asn	Glu	Leu	Met	Ser	Gln	Ile	Arg	Met	Gln
		275				280						285			
Asn	His	Phe	Gly	Ala	Val	Arg	Ser	Glu	Glu	Arg	Tyr	Tyr	Ile	Asp	Ala
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Asp	Leu	Leu	Arg	Glu	Ile	Lys	Gln	His	Leu	Lys	Gln	Gln	Gln	Glu	Gly
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Leu	Ser	His	Leu	Ile	Ser	Ile	Ile	Lys	Asp	Asp	Leu	Glu	Asp	Ile	Lys
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Phe Ser

<210> 4565  
<211> 2344  
<212> DNA  
<213> Homo sapiens

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&lt;210&gt; 4566

&lt;211&gt; 247

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4566

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 Glu Ile Leu Arg Leu Arg Gln Ser Glu Arg Met Ser Gln Asp Asp Phe  
 35 40 45  
 Gln Ser Pro Pro Ile Val Glu Leu Arg Glu Lys Ile Gln Pro Glu Ile  
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 Leu Glu Leu Ile Lys Gln Gln Arg Leu Asn Arg Leu Cys Glu Gly Ser  
 65 70 75 80  
 Ser Phe Arg Lys Ile Gly Asn Arg Arg Gln Glu Arg Phe Trp Tyr

85 90 95  
 Cys Arg Leu Ala Leu Asn His Lys Val Leu His Tyr Gly Asp Leu Asp  
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 Asp Asn Pro Gln Gly Glu Val Thr Phe Glu Ser Leu Gln Glu Lys Ile  
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 Pro Val Ala Asp Ile Lys Ala Ile Val Thr Gly Lys Asp Cys Pro His  
 130 135 140  
 Met Lys Glu Lys Ser Ala Leu Lys Gln Asn Lys Glu Val Leu Glu Leu  
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 Ala Phe Ser Ile Leu Tyr Asp Pro Asp Glu Thr Leu Asn Phe Ile Ala  
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 Pro Asn Lys Tyr Glu Tyr Cys Ile Trp Ile Asp Gly Leu Ser Ala Leu  
 180 185 190  
 Leu Gly Lys Asp Met Ser Ser Glu Leu Thr Lys Ser Asp Leu Asp Thr  
 195 200 205  
 Leu Leu Ser Met Glu Met Lys Leu Arg Leu Leu Asp Leu Glu Asn Ile  
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 Asp Phe Val Tyr His Tyr Gly  
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<210> 4567  
 <211> 1211  
 <212> DNA  
 <213> Homo sapiens

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<210> 4568  
 <211> 120  
 <212> PRT  
 <213> Homo sapiens

<400> 4568  
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 Val Gln Gln Arg Glu Leu Ala Val Thr Ser Pro Lys Asp Gly Ser Ile  
 50 55 60  
 Ser Ile Leu Gly Ser Asp Ala Thr Thr Cys His Ile Val Val Leu  
 65 70 75 80  
 Arg His Thr Gly Asn Gly Ala Thr Cys Leu Thr His Cys Asp Gly Thr  
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<210> 4569  
 <211> 1797  
 <212> DNA  
 <213> Homo sapiens

<400> 4569  
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1797

&lt;210&gt; 4570

<211> 141  
 <212> PRT  
 <213> Homo sapiens

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 Gln Thr Trp His Ile Arg Phe Gly Asp Asn Gly Leu Gly Thr Leu Met  
 35 40 45  
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 50 55 60  
 Gly Gly Pro Arg Val Arg His Cys Gly Glu Gly Asn Ala Gly Glu Ser  
 65 70 75 80  
 Gly Pro Thr Leu Gln Leu Gly Thr Arg Gly Arg Lys Gln Arg Gly Gln  
 85 90 95  
 Ala Ser Val Pro Leu Pro Gln Glu Gln Thr Ser Gly Pro Gln Glu Gly  
 100 105 110  
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 Lys Gly Trp Arg Ala Ala Gly Arg Gln Pro Ser Thr Arg  
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<210> 4571  
 <211> 1084  
 <212> DNA  
 <213> Homo sapiens

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 180  
 aacgagaaga gaaaagaaat gctgggaacg cagtacggag cgccatgaag tccgaggaac  
 240  
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 300  
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 gacc  
 1084

<210> 4572  
 <211> 126  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Ile Asp Glu Leu Ile Glu Ser Gly Lys Glu Glu Gly Met Lys Ile Asp  
 50 55 60  
 Leu Ile Asp Gly Lys Gly Arg Gly Val Ile Ala Thr Lys Gln Phe Ser  
 65 70 75 80  
 Arg Gly Asp Phe Val Glu Tyr His Gly Asp Leu Ile Glu Ile Thr  
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 Asp Ala Lys Lys Arg Glu Ala Leu Tyr Ala Gln Asp Pro Ser Thr Gly  
 100 105 110  
 Cys Tyr Met Tyr Tyr Phe Gln Tyr Leu Ser Lys Thr Tyr Trp  
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 <211> 309  
 <212> DNA  
 <213> Homo sapiens

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 180  
 tctggccac aaggccttct tggccccctt ggccccccag cccctgttgg gccaccccat  
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309

<210> 4574  
<211> 103  
<212> PRT  
<213> Homo sapiens

<400> 4574  
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35 40 45  
Ala Gly Ala Val Gly Thr Pro Gly Lys Arg Gly Pro Ser Gly Pro Gln  
50 55 60  
Gly Leu Leu Gly Pro Pro Gly Pro Pro Ala Pro Val Gly Pro Pro His  
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<210> 4575  
<211> 1068  
<212> DNA  
<213> Homo sapiens

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<210> 4576

<211> 107

<212> PRT

<213> Homo sapiens

<400> 4576

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			20					25					30		
Pro	Ala	Arg	His	Val	Ala	Thr	Ala	Gln	Gly	Glu	Val	Leu	Pro	Pro	Gly
		35				40					45				
Gly	Leu	Gly	Gly	Ala	Ala	Gln	Arg	Ala	Arg	Gly	Gln	Ser	His	Gly	Gly
50					55					60					
Thr	Val	Pro	Gly	Asn	Ala	Pro	Ala	Ala	Asp	Leu	Leu	Ala	Leu	Ser	Pro
65				70					75					80	
Arg	Leu	Glu	Arg	Ser	Gly	Thr	Ile	Ser	Thr	His	Cys	Lys	Leu	Arg	Leu
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Pro	Gly	Ser	Arg	His	Ser	Pro	Ala	Ser	Ala	Ser					
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<210> 4577

<211> 3525

<212> DNA

<213> Homo sapiens

<400> 4577

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3525

&lt;210&gt; 4578

&lt;211&gt; 1007

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4578

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Val Lys Ala Gly Val Arg Val Met Gln Val Ser Pro Asp Gly Gln His
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Leu Ala Ser Gly Asp Arg Ser Gly Asn Leu Arg Gln Val Gly Pro Gly
 35           40           45
Ser Val Gln Cys Thr Pro Pro Ser Ser Ser Ser Gly Ser Gln Gly Ser
 50           55           60
Gly Gln Lys Pro Trp Pro Trp His Leu Leu Leu Pro Ile Gly Asn Glu
 65           70           75           80
Gly Leu Ile His Glu Leu His Phe Met Asp Glu Leu Val Lys Val Glu
 85           90           95
Ala His Asp Ala Glu Val Leu Cys Leu Glu Tyr Ser Lys Pro Glu Thr
100           105           110
Gly Leu Thr Leu Leu Ala Ser Ala Ser Arg Asp Arg Leu Ile His Val
115           120           125
Leu Asn Val Glu Lys Asn Tyr Asn Leu Glu Gln Thr Leu Asp Asp His
130           135           140
Ser Ser Ser Ile Thr Ala Ile Lys Phe Ala Gly Asn Arg Asp Ile Gln
145           150           155           160
Met Ile Ser Cys Gly Ala Asp Lys Ser Ile Tyr Phe Arg Ser Ala Gln
165           170           175
Gln Gly Ser Asp Gly Leu His Phe Val Arg Thr His His Val Ala Glu
180           185           190
Lys Thr Thr Leu Tyr Asp Met Asp Ile Asp Ile Thr Gln Lys Tyr Val
195           200           205
Ala Val Ala Cys Gln Asp Arg Asn Val Arg Val Tyr Asn Thr Val Asn
210           215           220
Gly Lys Gln Lys Lys Cys Tyr Lys Gly Ser Gln Gly Asp Glu Gly Ser
225           230           235           240
Leu Leu Lys Val His Val Asp Pro Ser Gly Thr Phe Leu Ala Thr Ser
245           250           255
Cys Ser Asp Lys Ser Ile Ser Val Ile Asp Phe Tyr Ser Gly Glu Cys
260           265           270
Ile Ala Lys Met Phe Gly His Ser Gly Gly Cys Ala Ser Leu Leu Gly
275           280           285
Met Pro Pro His Pro Pro Thr Pro Ser Asp Ser Glu Gly Lys Cys Ser
290           295           300
Leu Ser Ala Leu Phe Ala Glu Ile Ile Thr Ser Met Lys Phe Thr Tyr
305           310           315           320
Asp Cys His His Leu Ile Thr Val Ser Gly Asp Ser Cys Val Phe Ile
325           330           335
Trp His Leu Gly Pro Glu Ile Thr Asn Cys Met Lys Gln His Leu Leu
340           345           350
Glu Ile Asp His Arg Gln Gln Gln Gln His Thr Asn Asp Lys Lys Arg
355           360           365
Ser Gly His Pro Arg Ser Trp Gln Pro Leu Pro Val His Gln Arg Asp
370           375           380
Glu Ser Leu Pro Gly Pro His Gly Val Met Leu Gly Thr Gln Ser Ser
385           390           395           400
Leu Pro Ala Asn Gln Arg Gln Ala Ala Thr Val Gly Lys Ala Ala Gly

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Asp Asp Asp Val Ala Asp Gly Leu Ala Phe His Ala Lys Arg Ser Tyr
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Thr Ile Leu Asp Ala Gln Asp Leu Asp Cys Tyr Phe Thr Pro Met Lys
      450      455      460
Pro Glu Ser Leu Glu Asn Ser Ile Leu Asp Ser Leu Glu Pro Gln Ser
465      470      475      480
Leu Ala Ser Leu Leu Ser Glu Gln Lys Glu Ser Ser Glu Ala Ser Glu
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Leu Ile Leu Tyr Ser Leu Glu Ala Glu Val Thr Val Thr Gly Thr Asp
      500      505      510
Ser Gln Tyr Cys Arg Lys Glu Val Glu Ala Gly Pro Gly Asp Gln Gln
      515      520      525
Gly Asp Ser Tyr Leu Arg Val Ser Ser Asp Ser Pro Lys Asp Gln Ser
      530      535      540
Pro Pro Glu Gly Pro Thr Glu Asp Glu Leu Ser Leu Pro Glu Gly Pro
545      550      555      560
Ser Val Pro Ser Ser Ser Leu Pro Gln Thr Pro Glu Gln Glu Lys Phe
      565      570      575
Leu Arg His His Phe Glu Thr Leu Thr Glu Ser Pro Cys Arg Ala Leu
      580      585      590
Gly Asp Val Glu Ala Ser Glu Ala Glu Asp His Phe Phe Asn Pro Arg
      595      600      605
Leu Ser Ile Ser Thr Gln Phe Leu Ser Ser Leu Gln Lys Ala Ser Arg
      610      615      620
Phe Thr His Thr Phe Pro Pro Arg Ala Thr Gln Cys Leu Val Lys Ser
625      630      635      640
Pro Glu Val Lys Leu Met Asp Arg Gly Gly Ser Gln Pro Arg Ala Gly
      645      650      655
Thr Gly Tyr Ala Ser Pro Asp Arg Thr His Ser Val Pro Ser Ala Ser
      660      665      670
Val Thr Ala Pro Cys Leu Thr Ser Leu Ala Ser Cys Val Pro Ala Ser
      675      680      685
Ser Val Leu Pro Thr Asp Arg Asn Leu Pro Thr Pro Thr Ser Ala Pro
690      695      700
Thr Pro Gly Leu Ala Gln Gly Val His Ala Pro Ser Thr Cys Ser Tyr
705      710      715      720
Met Glu Ala Thr Ala Ser Ser Arg Ala Arg Ile Ser Arg Ser Ile Ser
      725      730      735
Leu Gly Asp Ser Glu Gly Pro Ile Val Ala Thr Leu Ala Gln Pro Leu
      740      745      750
Arg Arg Pro Ser Ser Val Gly Glu Leu Ala Ser Leu Gly Gln Glu Leu
      755      760      765
Gln Ala Ile Thr Thr Ala Thr Thr Pro Ser Leu Asp Ser Glu Gly Gln
      770      775      780
Glu Pro Ala Leu Arg Ser Trp Gly Asn His Glu Ala Arg Ala Asn Leu
785      790      795      800
Arg Leu Thr Leu Ser Ser Ala Cys Asp Gly Leu Leu Gln Pro Pro Val
      805      810      815
Asp Thr Gln Pro Gly Val Thr Val Pro Ala Val Ser Phe Pro Ala Pro
      820      825      830
Ser Pro Val Glu Glu Ser Ala Leu Arg Leu His Gly Ser Ala Phe Arg

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      865              870              875              880
Ser Leu Leu Glu Pro Thr Ser Gly Trp Gly Thr Ser Cys Thr Gly Cys
      885              890              895
Arg Pro Pro Ser Lys Lys Pro Ser Thr Phe Thr Val Cys Trp Ser Pro
      900              905              910
Val Ala Arg Trp Thr Pro Gly Ser Ser Arg His Gly Leu Ser Trp Ser
      915              920              925
Pro Pro Ser Cys Gly Ser Thr Ala Ser Trp Arg Leu Asn Ala Trp Trp
      930              935              940
Gly Leu Val Trp Pro Gln Pro Arg Leu Cys Pro Ala Gln Asp Pro Arg
      945              950              955              960
Pro His Arg Arg Cys Thr Pro Trp Pro Ala Gln Thr Cys Arg Pro Cys
      965              970              975
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<210> 4579  
 <211> 321  
 <212> DNA  
 <213> Homo sapiens

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180
aatgacaaga agcggagtgg cccccccagg caggatacgt atgtgtccac acctagttag
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300
gaagagatgc tgaagacacc n
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<210> 4580  
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 <212> PRT  
 <213> Homo sapiens

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20     25     30
Ile Trp His Leu Gly Pro Glu Ile Thr Asn Cys Met Lys Gln His Leu
35     40     45
Leu Glu Ile Asp His Arg Gln Gln Gln Gln His Thr Asn Asp Lys Lys

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50                      55                      60  
 Arg Ser Gly Pro Pro Arg Gln Asp Thr Tyr Val Ser Thr Pro Ser Glu  
 65                      70                      75                      80  
 Ile His Ser Leu Ser Pro Gly Glu Gln Thr Glu Asp Asp Leu Glu Glu  
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<210> 4581  
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 <212> DNA  
 <213> Homo sapiens

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 120  
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 180  
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 240  
 gagcagtcac ggggccagtg ggctcgccgg cgacggcgcg cacgctcgtg gtctcctagc  
 300  
 tcctcagcat ccagctcggc gtctccaggg cgatcccaga gccccgggc ggccgcggt  
 360  
 gccctgagcc agcagcagag cctgcaggag cggctgcggc tgcgggagga gcggaagcag  
 420  
 caggaggagc tgatgaaggc cttcgagacg cccgaggaga agcgcgcacg gcggctggcc  
 480  
 aagaaggagg ccaaggagcg caagaagcgg gagaagatgg gctgggggtga ggagtacatg  
 540  
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<210> 4582

<211> 354

<212> PRT

<213> Homo sapiens

<400> 4582

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Leu	Ala	Lys	Lys	Glu	Ala	Lys	Glu	Arg	Lys	Lys	Arg	Glu	Lys	Met	Gly	
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Trp	Gly	Glu	Glu	Tyr	Met	Gly	Tyr	Thr	Asn	Thr	Asp	Asn	Pro	Phe	Gly	
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Asp	Asn	Asn	Leu	Leu	Gly	Thr	Phe	Ile	Trp	Asn	Lys	Ala	Leu	Glu	Lys	
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Lys	Gly	Ile	Ser	His	Leu	Glu	Glu	Lys	Glu	Leu	Lys	Glu	Arg	Asn	Lys	
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Arg	Ile	Gln	Glu	Asp	Asn	Arg	Leu	Glu	Leu	Gln	Lys	Val	Lys	Gln	Leu	
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Arg	Leu	Glu	Arg	Glu	Arg	Glu	Lys	Ala	Met	Arg	Glu	Gln	Glu	Leu	Glu	
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Met	Leu	Gln	Arg	Val	Lys	Gly	Thr	Glu	His	Phe	Lys	Thr	Trp	Glu	Glu	
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Gln	Glu	Asp	Asn	Phe	His	Leu	Gln	Gln	Ala	Lys	Leu	Arg	Ser	Lys	Ile	
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Ile	Ser	Ala	Glu	Asp	Asp	Asp	Leu	Ala	Gly	Glu	Met	His	Glu	Pro	Tyr	
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Asp	Ile	Gln	Val	Tyr	Met	Glu	Leu	Glu	Gln	Gly	Lys	Asn	Ala	Asp	Phe	
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Trp	Arg	Asp	Met	Thr	Thr	Ile	Thr	Glu	Asp	Glu	Ile	Ser	Lys	Leu	Arg	
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Lys	Leu	Glu	Ala	Ser	Gly	Lys	Gly	Pro	Gly	Glu	Arg	Arg	Glu	Gly	Val	
	260							265					270			
Asn	Ala	Ser	Val	Ser	Ser	Asp	Val	Gln	Ser	Val	Phe	Lys	Gly	Lys	Thr	
	275						280					285				
Tyr	Asn	Gln	Leu	Gln	Val	Ile	Phe	Gln	Gly	Ile	Glu	Gly	Lys	Ile	Arg	
	290					295					300					
Ala	Gly	Gly	Pro	Asn	Leu	Asp	Met	Gly	Tyr	Trp	Glu	Ser	Leu	Leu	Gln	

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Gln Leu Arg Ala His Met Ala Arg Ala Arg Leu Arg Glu Arg His Gln						
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<210> 4583  
 <211> 3350  
 <212> DNA  
 <213> Homo sapiens

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<210> 4584  
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 <212> PRT  
 <213> Homo sapiens

<400> 4584  
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 35 40 45  
 Gln Leu Leu Gln Ile Arg Gln Asp Val Glu Ser Cys Tyr Phe Ala Ala  
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 Gln Thr Met Lys Met Lys Ile Gln Thr Ser Phe Tyr Glu Leu Pro Thr  
 65 70 75 80  
 Asp Ser His Ala Ser Leu Arg Asp Ser Leu Leu Thr His Ile Gln Asn  
 85 90 95  
 Leu Lys Asp Leu Ser Pro Val Ile Val Thr Gln Leu Ala Leu Ala Ile  
 100 105 110  
 Ala Asp Leu Ala Leu Gln Met Pro Ser Trp Lys Gly Cys Val Gln Thr  
 115 120 125  
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 130 135 140  
 Glu Ile Leu Thr Val Leu Pro Glu Glu Val His Ser Arg Ser Leu Arg  
 145 150 155 160  
 Ile Gly Ala Asn Arg Arg Thr Glu Ile Ile Glu Asp Leu Ala Phe Tyr  
 165 170 175  
 Ser Ser Thr Val Val Ser Leu Leu Met Thr Cys Val Glu Lys Ala Gly  
 180 185 190  
 Thr Asp Glu Lys Met Leu Met Lys Val Phe Arg Cys Leu Gly Ser Trp  
 195 200 205  
 Phe Asn Leu Gly Val Leu Asp Ser Asn Phe Met Ala Asn Asn Lys Leu  
 210 215 220  
 Leu Ala Leu Leu Phe Glu Val Leu Gln Gln Asp Lys Thr Ser Ser Asn

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225          230          235          240
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Glu Asn Val Glu Thr Asn Leu Pro Leu Ala Met Gln Leu Phe Gln Gly
          260          265          270
Val Leu Thr Leu Glu Thr Ala Tyr His Met Ala Val Ala Arg Glu Asp
          275          280          285
Leu Asp Lys Val Leu Asn Tyr Cys Arg Ile Phe Thr Glu Leu Cys Glu
          290          295          300
Thr Phe Leu Glu Lys Ile Val Cys Thr Pro Gly Gln Gly Leu Gly Asp
305          310          315          320
Leu Arg Thr Leu Glu Leu Leu Leu Ile Cys Ala Gly His Pro Gln Tyr
          325          330          335
Glu Val Val Glu Ile Ser Phe Asn Phe Trp Tyr Arg Leu Gly Glu His
          340          345          350
Leu Tyr Lys Thr Asn Asp Glu Val Ile His Gly Ile Phe Lys Ala Tyr
          355          360          365
Ile Gln Arg Leu Leu His Ala Leu Ala Arg His Cys Gln Leu Glu Pro
          370          375          380
Asp His Glu Gly Val Pro Glu Glu Thr Asp Asp Phe Gly Glu Phe Arg
385          390          395          400
Met Arg Val Ser Asp Leu Val Lys Asp Leu Ile Phe Leu Ile Gly Ser
          405          410          415
Met Glu Cys Phe Ala Gln Leu Tyr Ser Thr Leu Lys Glu Gly Asn Pro
          420          425          430
Pro Trp Glu Val Thr Glu Ala Val Leu Phe Ile Met Ala Ala Ile Ala
          435          440          445
Lys Ser Val Asp Pro Glu Asn Asn Pro Thr Leu Val Glu Val Leu Glu
          450          455          460
Gly Val Val Arg Leu Pro Glu Thr Val His Thr Ala Val Arg Tyr Thr
465          470          475          480
Ser Ile Glu Leu Val Gly Glu Met Ser Glu Val Val Asp Arg Asn Pro
          485          490          495
Gln Phe Leu Asp Pro Val Leu Gly Tyr Leu Met Lys Gly Leu Cys Glu
          500          505          510
Lys Pro Leu Ala Ser Ala Ala Ala Lys Ala Ile His Asn Ile Cys Ser
          515          520          525
Val Cys Arg Asp His Met Ala Gln His Phe Asn Gly Leu Leu Glu Ile
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Ala Arg Ser Leu Asp Ser Phe Leu Leu Ser Pro Glu Ala Ala Val Gly
545          550          555          560
Leu Leu Lys Gly Thr Ala Leu Val Leu Ala Arg Leu Pro Leu Asp Lys
          565          570          575
Ile Thr Glu Cys Leu Ser Glu Leu Cys Ser Val Gln Val Met Ala Leu
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Lys Lys Leu Leu Ser Gln Glu Pro Ser Asn Gly Ile Ser Ser Asp Pro
          595          600          605
Thr Val Phe Leu Asp Arg Leu Ala Val Ile Phe Arg His Thr Asn Pro
          610          615          620
Ile Val Glu Asn Gly Gln Thr His Pro Cys Gln Lys Val Ile Gln Glu
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Ile Trp Pro Val Leu Ser Glu Thr Leu Asn Lys His Arg Ala Asp Asn
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Arg Ile Val Glu Arg Cys Cys Arg Cys Leu Arg Phe Ala Val Arg Cys

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 690 695 700  
 Ser Ile Leu Val Asp Glu Tyr Gly Met Glu Glu Gly Cys Arg Gln Gly  
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 Leu Leu Asp Met Leu Gln Ala Leu Cys Ile Pro Thr Phe Gln Leu Leu  
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 Glu Gln Gln Asn Gly Leu Gln Asn His Pro Asp Thr Val Asp Asp Leu  
 740 745 750  
 Phe Arg Leu Ala Thr Arg Phe Ile Gln Arg Ser Pro Val Thr Leu Leu  
 755 760 765  
 Arg Ser Gln Val Val Ile Pro Ile Leu Gln Trp Ala Ile Ala Ser Thr  
 770 775 780  
 Thr Leu Asp His Arg Asp Ala Asn Cys Ser Val Met Arg Phe Leu Arg  
 785 790 795 800  
 Asp Leu Ile His Thr Gly Val Ala Asn Asp His Glu Glu Asp Phe Glu  
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 820 825 830  
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 835 840 845  
 Thr Leu Pro Asp Val Ala Glu Val Leu Trp Glu Ile Met Gln Val Asp  
 850 855 860  
 Arg Pro Thr Phe Cys Arg Trp Leu Glu Asn Ser Leu Lys Gly Leu Pro  
 865 870 875 880  
 Lys Glu Thr Thr Val Gly Ala Val Thr Val Thr His Lys Gln Leu Thr  
 885 890 895  
 Asp Phe His Lys Gln Val Thr Ser Ala Glu Glu Cys Lys Gln Val Cys  
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 Trp Ala Leu Arg Asp Phe Thr Arg Leu Phe Arg  
 915 920

&lt;210&gt; 4585

&lt;211&gt; 1952

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4585

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&lt;210&gt; 4586

&lt;211&gt; 530

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4586

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Lys Asp Val His Lys Gly Val Gly Gly Ile Ile Phe Ser Ser Ser Pro
          35          40          45
Ile Leu Asp Leu Ser Glu Ser Gly Leu Cys Arg Leu Glu Glu Val Phe
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Arg Ile Pro Ser Leu Gln Gln Leu His Leu Gln Arg Asn Ala Leu Cys
          65          70          75          80
Val Ile Pro Gln Asp Phe Phe Gln Leu Leu Pro Asn Leu Thr Trp Leu
          85          90          95
Asp Leu Arg Tyr Asn Arg Ile Lys Ala Leu Pro Ser Gly Ile Gly Ala
          100          105          110
His Gln His Leu Lys Thr Leu Leu Leu Glu Arg Asn Pro Ile Lys Met
          115          120          125
Leu Pro Val Glu Leu Gly Ser Val Thr Thr Leu Lys Ala Leu Asn Leu
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Arg His Cys Pro Leu Glu Phe Pro Pro Gln Leu Val Val Gln Lys Gly
          145          150          155          160
Leu Val Ala Ile Gln Arg Phe Leu Arg Met Trp Ala Val Glu His Ser
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Leu Pro Arg Asn Pro Thr Ser Gln Glu Ala Pro Pro Val Arg Glu Met
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Thr Leu Arg Asp Leu Pro Ser Pro Gly Leu Glu Leu Ser Gly Asp His
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Ala Ser Asn Gln Gly Ala Val Asn Ala Gln Asp Pro Glu Gly Ala Val
          210          215          220
Met Lys Glu Lys Ala Ser Phe Leu Pro Pro Val Glu Lys Pro Asp Leu
          225          230          235          240
Ser Glu Leu Arg Lys Ser Ala Asp Ser Ser Glu Asn Trp Pro Ser Glu
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Glu Glu Ile Arg Arg Phe Trp Lys Leu Arg Gln Glu Ile Val Glu His
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Val Lys Ala Asp Val Leu Gly Asp Gln Leu Leu Thr Arg Glu Leu Pro
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Pro Asn Leu Lys Ala Ala Leu Asn Ile Glu Lys Glu Leu Pro Lys Pro
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Arg His Val Phe Arg Arg Lys Thr Ala Ser Ser Arg Ser Ile Leu Pro
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Asp Leu Leu Ser Pro Tyr Gln Met Ala Ile Arg Ala Lys Arg Leu Glu
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Glu Ser Arg Ala Ala Ala Leu Arg Glu Leu Gln Glu Lys Gln Ala Leu
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Met Glu Gln Gln Arg Arg Glu Lys Arg Ala Leu Gln Glu Trp Arg Glu
          355          360          365
Arg Ala Gln Arg Met Arg Lys Arg Lys Glu Glu Leu Ser Lys Leu Leu
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Pro Pro Arg Arg Ser Met Val Ala Ser Lys Ile Pro Ser Ala Thr Asp

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 Arg Glu Gln Arg Arg Phe His Gly Gln Ala Pro Leu Glu Glu Met Arg  
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 Lys Ala Ala Glu Asp Leu Glu Ile Ala Thr Glu Leu Gln Asp Glu Val  
 465                                   470                                   475                                   480  
 Leu Lys Leu Lys Leu Gly Leu Thr Leu Asn Lys Asp Arg Arg Arg Ala  
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 Ala Leu Thr Gly Asn Leu Ser Leu Gly Leu Pro Ala Ala Gln Pro Gln  
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 <211> 1723  
 <212> DNA  
 <213> Homo sapiens

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 1723

&lt;210&gt; 4588

&lt;211&gt; 328

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4588

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 Pro Ser Lys Lys Gly Glu Thr Pro Thr Val Asp Gly Thr Trp Lys Thr  
 35 40 45  
 Pro Ser Phe Pro Lys Lys Lys Thr Ala Ala Ser Ser Asn Gly Ser Gly  
 50 55 60  
 Gln Pro Leu Asp Lys Lys Ala Ala Val Ser Trp Leu Thr Pro Ala Pro  
 65 70 75 80  
 Ser Lys Lys Ala Asp Ser Val Ala Ala Lys Val Asp Leu Leu Gly Glu  
 85 90 95  
 Phe Gln Ser Ala Leu Pro Lys Ile Asn Ser His Pro Thr Arg Ser Gln  
 100 105 110  
 Lys Lys Ser Ser Gln Lys Lys Ser Ser Lys Lys Asn His Pro Gln Lys  
 115 120 125  
 Asn Ala Pro Gln Asn Ser Thr Gln Ala His Ser Glu Asn Lys Cys Ser

130 135 140  
 Gly Ala Ser Gln Lys Leu Pro Arg Lys Met Val Ala Ile Asp Cys Glu  
 145 150 155 160  
 Met Val Gly Thr Gly Pro Lys Gly His Val Ser Ser Leu Ala Arg Cys  
 165 170 175  
 Ser Ile Val Asn Tyr Asn Gly Asp Val Leu Tyr Asp Glu Tyr Ile Leu  
 180 185 190  
 Pro Pro Cys His Ile Val Asp Tyr Arg Thr Arg Trp Ser Gly Ile Arg  
 195 200 205  
 Lys Gln His Met Val Asn Ala Thr Pro Phe Lys Ile Ala Arg Gly Gln  
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 Ile Leu Lys Ile Leu Thr Gly Lys Ile Val Val Gly His Ala Ile His  
 225 230 235 240  
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 245 250 255  
 Asp Thr Ser His Ile Pro Pro Leu Asn Arg Lys Ala Asp Cys Pro Glu  
 260 265 270  
 Asn Ala Thr Met Ser Leu Lys His Leu Thr Lys Lys Leu Leu Asn Arg  
 275 280 285  
 Asp Ile Gln Val Gly Lys Ser Gly His Ser Ser Val Glu Asp Ala Gln  
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 <211> 585  
 <212> DNA  
 <213> Homo sapiens

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<210> 4590

<211> 121  
 <212> PRT  
 <213> Homo sapiens

<400> 4590  
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 Gly Val Arg Val Ser Ala Ala Pro Leu Gly Gln Gly Gly Gly His Thr  
 35 40 45  
 His Thr Leu Ser Pro Leu Ser Phe Arg Cys Ser Gln Arg Glu Pro Gln  
 50 55 60  
 Gly Phe Arg Pro Gly Met Arg Cys Gly Gly Ser Ser Leu Gly Arg Thr  
 65 70 75 80  
 Cys Cys Ser Pro Thr Arg Arg Ala Cys Val Val Ser Arg Ala Val Thr  
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 Val Ala Ser Gly Phe Leu Gln Ala Ala Arg Leu Gly Pro Ser Leu  
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<210> 4591  
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<400> 4592  
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Lys Ala Ser Ser Ile Tyr Ser Thr Ala Leu Cys Phe Gly Leu Lys Arg
      35           40           45
Ala Pro Leu Trp Pro Ser Gly His Asp Arg Leu His Glu Thr Arg Lys
      50           55           60
Leu Arg Cys Leu Ala Asp Arg Leu Val Ser Pro His Pro Ala Ser Ser
65           70           75           80
Pro Gly Ser Arg Tyr Leu Pro Gln Asn Ser Leu His Lys Trp Pro Gln
      85           90           95
Ala Cys Ala Gly Leu Trp Gly Phe Leu Pro Trp Ala Val Val Leu Gly
      100          105          110
Met Cys Ser Pro Gln Ala Asp Gly Gln Leu Trp Glu Gly Trp Ser Cys
      115          120          125
Arg Leu Gly Ile His Thr Pro Ala His Val Ala Ser Pro Ser Ala Val
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Trp Ser Gln Gly Trp Ala Gly Lys
145           150

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&lt;210&gt; 4593

&lt;211&gt; 4783

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4593

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<210> 4594

<211> 1145

<212> PRT

<213> Homo sapiens

<400> 4594

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Phe	Ser	Ser	Phe	Ala	Ser	Gln	Ala	Ser	Gly	Ser	Ser	Ser	Ser	Ala	Thr
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Thr	Val	Thr	Ser	Lys	Val	Ala	Pro	Ser	Trp	Pro	Glu	Ser	His	Ser	Ser
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Asp	Ser	Ser	Lys	Leu	Val	Ser	Gly	Val	Leu	Gly	Ser	Ala	Leu	Thr	Ser
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Gly	Gly	Pro	Ser	Leu	Ser	Ala	Met	Gly	Asn	Gly	Arg	Ser	Ser	Ser	Pro
		100						105					110		
Thr	Ser	Ser	Leu	Thr	Gln	Pro	Ile	Glu	Met	Pro	Thr	Leu	Ser	Ser	Ser
		115				120						125			
Pro	Thr	Glu	Glu	Arg	Pro	Thr	Val	Gly	Pro	Gly	Gln	Gln	Asp	Asn	Pro
	130					135					140				
Leu	Leu	Lys	Thr	Phe	Ser	Asn	Val	Phe	Gly	Arg	His	Ser	Gly	Gly	Phe
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Leu	Ser	Ser	Pro	Ala	Asp	Phe	Ser	Gln	Glu	Asn	Lys	Ala	Pro	Phe	Glu
			165					170					175		
Ala	Val	Lys	Arg	Phe	Ser	Leu	Asp	Glu	Arg	Ser	Leu	Ala	Cys	Arg	Gln



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Asp	Ser	Asp	Ser	Ser	Thr	Asn	Ser	Asp	Leu	Ser	Asp	Leu	Ser	Asp	Ser				
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Glu	Glu	Gln	Leu	Gln	Ala	Lys	Thr	Gly	Leu	Lys	Gly	Ile	Pro	Glu	His				
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Leu	Met	Gly	Lys	Leu	Gly	Pro	Asn	Gly	Glu	Arg	Ser	Ala	Glu	Leu	Leu				
225										230					235				
Leu	Gly	Lys	Ser	Lys	Gly	Lys	Gln	Ala	Pro	Lys	Gly	Arg	Pro	Arg	Thr				
245										250					255				
Ala	Pro	Leu	Lys	Val	Gly	Gln	Ser	Val	Leu	Lys	Asp	Val	Ser	Lys	Val				
260										265					270				
Lys	Lys	Leu	Lys	Gln	Ser	Gly	Glu	Pro	Phe	Leu	Gln	Asp	Gly	Ser	Cys				
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Ile	Asn	Val	Ala	Pro	His	Leu	His	Lys	Cys	Arg	Glu	Cys	Arg	Leu	Glu				
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Arg	Tyr	Arg	Lys	Phe	Lys	Glu	Gln	Glu	Gln	Asp	Asp	Ser	Thr	Val	Ala				
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Cys	Arg	Phe	Phe	His	Phe	Arg	Arg	Leu	Ile	Phe	Thr	Arg	Lys	Gly	Val				
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Leu	Arg	Val	Glu	Gly	Phe	Leu	Ser	Pro	Gln	Gln	Ser	Asp	Pro	Asp	Ala				
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Glu	Thr	Ser	Lys	Tyr	Ile	Leu	Ala	Asn	Val	Gly	Asp	Gln	Phe	Cys	Gln				
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Leu	Val	Met	Ser	Glu	Lys	Glu	Ala	Met	Met	Met	Val	Glu	Pro	His	Gln				
385										390					395				
Lys	Val	Ala	Trp	Lys	Arg	Ala	Val	Arg	Gly	Val	Arg	Glu	Met	Cys	Asp				
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Val	Cys	Glu	Thr	Thr	Leu	Phe	Asn	Ile	His	Trp	Val	Cys	Arg	Lys	Cys				
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Gly	Phe	Gly	Val	Cys	Leu	Asp	Cys	Tyr	Arg	Leu	Arg	Lys	Ser	Arg	Pro				
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Phe	Ser	Gly	Gly	Gly	Gly	Pro	Ala	Pro	Val	Thr	Thr	Pro	Glu	Pro	Asp				
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His	Val	Pro	Lys	Ala	Asp	Ser	Thr	Asp	Ile	Arg	Ser	Glu	Glu	Pro	Leu				
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Arg	Pro	Pro	Cys	Pro	Asp	Thr	Ala	Pro	Pro	Ser	Ser	Ala	Leu	His	Trp				
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Gly Ser Leu Arg Ser Val	Leu Asn Lys Glu Ser His Ser Pro Phe Gly	
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Leu Asp Ser Phe Asn Ser Thr Ala Lys Val Ser Pro Leu Thr Pro Lys		640
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Leu Phe Asn Ser Ser Leu Leu Leu Gly Pro Thr Ala Ser Asn Asn Lys Thr		655
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Glu Gly Ser Ser Leu Arg Asp Leu Leu His Ser Gly Pro Gly Lys Leu		670
	675	680
Pro Gln Thr Pro Leu Asp Thr Gly Ile Pro Phe Pro Pro Val Phe Ser		685
	690	695
Thr Ser Ser Ala Gly Val Lys Ser Lys Ala Ser Leu Pro Asn Phe Leu		700
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Asp His Ile Ile Ala Ser Val Val Glu Asn Lys Lys Thr Ser Asp Ala		720
	725	730
Ser Lys Arg Ala Cys Asn Leu Thr Asp Thr Gln Lys Glu Val Lys Glu		735
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Met Val Met Gly Leu Asn Val Leu Asp Pro His Thr Ser His Ser Trp		750
	755	760
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	770	775
Asn Trp Lys Ile Phe Arg Glu Cys Trp Lys Gln Gly Gln Pro Val Leu		780
785	790	795
Val Ser Gly Val His Lys Lys Leu Lys Ser Glu Leu Trp Lys Pro Glu		800
	805	810
Ala Phe Ser Gln Glu Phe Gly Asp Gln Asp Val Asp Leu Val Asn Cys		815
	820	825
Arg Asn Cys Ala Ile Ile Ser Asp Val Lys Val Arg Asp Phe Trp Asp		830
	835	840
Gly Phe Glu Ile Ile Cys Lys Arg Leu Arg Ser Glu Asp Gly Gln Pro		845
	850	855
Met Val Leu Lys Leu Lys Asp Trp Pro Pro Gly Glu Asp Phe Arg Asp		860
865	870	875
Met Met Pro Thr Arg Phe Glu Asp Leu Met Glu Asn Leu Pro Leu Pro		880
	885	890
Glu Tyr Thr Lys Arg Asp Gly Arg Leu Asn Leu Ala Ser Arg Leu Pro		895
	900	905
Ser Tyr Phe Val Arg Pro Asp Leu Gly Pro Lys Met Tyr Asn Ala Tyr		910
	915	920
Gly Leu Ile Thr Ala Glu Asp Arg Arg Val Gly Thr Thr Asn Leu His		925
	930	935
Leu Asp Val Ser Asp Ala Val Asn Val Met Val Tyr Val Gly Ile Pro		940
945	950	955
Ile Gly Glu Gly Ala His Asp Glu Glu Val Leu Lys Thr Ile Asp Glu		960
	965	970
Gly Asp Ala Asp Glu Val Thr Lys Gln Arg Ile His Asp Gly Lys Glu		975
	980	985
Lys Pro Gly Ala Leu Trp His Ile Tyr Ala Ala Lys Asp Ala Glu Lys		990
	995	1000
Ile Arg Glu Leu Leu Arg Lys Val Gly Glu Glu Gln Gly Gln Glu Asn		1005
	1010	1015
Pro Pro Asp His Asp Pro Ile His Asp Gln Ser Trp Tyr Leu Asp Gln		1020
1025	1030	1035
Thr Leu Arg Lys Arg Leu Tyr Glu Glu Tyr Gly Val Gln Gly Trp Ala		1040

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Ile	Val	Gln	Phe	Leu	Gly	Asp	Ala	Val	Phe	Ile	Pro	Ala	Gly	Ala	Pro
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His	Gln	Val	His	Asn	Leu	Tyr	Ser	Cys	Ile	Lys	Val	Ala	Glu	Asp	Phe
	1075		1080		1085										
Val	Ser	Pro	Glu	His	Val	Lys	His	Cys	Phe	Arg	Leu	Thr	Gln	Glu	Phe
	1090		1095		1100										
Arg	His	Leu	Ser	Asn	Thr	His	Thr	Asn	His	Glu	Asp	Lys	Leu	Gln	Val
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Lys	Asn	Ile	Ile	Tyr	His	Ala	Val	Lys	Asp	Ala	Val	Gly	Thr	Leu	Lys
	1125		1130		1135										
Ala	His	Glu	Ser	Lys	Leu	Ala	Arg	Ser							
	1140		1145												

&lt;210&gt; 4595

&lt;211&gt; 935

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4595

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&lt;210&gt; 4596

<211> 169  
 <212> PRT  
 <213> Homo sapiens

<400> 4596  
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 35 40 45  
 Gly Arg Glu Ala Ala Leu Pro Gly Pro Ala Gly Asp Xaa Ala Val Lys  
 50 55 60  
 Gly Pro Ala Asp Pro Ala Ala Gln His Ser Arg Asp Gly Gln Gly Gly  
 65 70 75 80  
 Trp Pro Pro Ala Gln Gly Thr Ala Ser Thr Ala Gly Lys Ser Gly Ala  
 85 90 95  
 Pro Gly Ala Trp Ser Val Gly Gly Ala Thr Gly Pro Arg Gly Ala Lys  
 100 105 110  
 Gly Pro Arg Thr Gly Arg Pro Ala Pro Ser Pro Gly Ser Pro Pro Arg  
 115 120 125  
 Glu Ser Arg Cys Leu Ala Pro Gly Pro Ser Arg Leu Asp Pro Gly Pro  
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<210> 4597  
 <211> 515  
 <212> DNA  
 <213> Homo sapiens

<400> 4597  
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<210> 4598

<211> 135  
 <212> PRT  
 <213> Homo sapiens

<400> 4598  
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 35 40 45  
 Leu Leu Ser Ala Pro Phe Cys Leu Leu Pro Ala Leu Ser Gln Ala Val  
 50 55 60  
 Ser Pro Arg Asn Ser Leu Arg Asn Ile Leu Thr Leu Asn Ser Thr Ala  
 65 70 75 80  
 Glu Pro Ser Ser Trp Glu Ser Arg Glu Arg Pro Leu Gln Ser Arg Asn  
 85 90 95  
 Val Tyr Ser Ser Ala Ser Phe Ser Glu His Leu Asp Gly Gly Cys Ser  
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 Pro Leu Val Leu Gln Ser Leu Ala Arg Arg Ile Ser Ser Thr Trp Leu  
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<210> 4599  
 <211> 2314  
 <212> DNA  
 <213> Homo sapiens

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780  
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2314

<210> 4600  
 <211> 228  
 <212> PRT  
 <213> Homo sapiens

<400> 4600  
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 Ile Met Asn Tyr Leu Val Thr Glu Gly Phe Lys Glu Ala Ala Glu Lys  
 35 40 45  
 Phe Arg Met Glu Ser Gly Ile Glu Pro Ser Val Asp Leu Glu Thr Leu  
 50 55 60  
 Asp Glu Arg Ile Lys Ile Arg Glu Met Ile Leu Lys Gly Gln Ile Gln  
 65 70 75 80  
 Glu Ala Ile Ala Leu Ile Asn Ser Leu His Pro Glu Leu Leu Asp Thr  
 85 90 95  
 Asn Arg Tyr Leu Tyr Phe His Leu Gln Gln His Leu Ile Glu Leu  
 100 105 110  
 Ile Arg Gln Arg Glu Thr Glu Ala Ala Leu Glu Phe Ala Gln Thr Gln  
 115 120 125  
 Leu Ala Glu Gln Gly Glu Glu Ser Arg Glu Cys Leu Thr Glu Met Glu  
 130 135 140  
 Arg Thr Leu Ala Leu Leu Ala Phe Asp Ser Pro Glu Glu Ser Pro Phe  
 145 150 155 160  
 Gly Asp Leu Leu His Thr Met Gln Arg Gln Lys Val Trp Ser Glu Val  
 165 170 175  
 Asn Gln Ala Val Leu Asp Tyr Glu Asn Arg Glu Ser Thr Pro Lys Leu  
 180 185 190  
 Ala Lys Leu Leu Lys Leu Leu Leu Trp Ala Gln Asn Glu Leu Asp Gln  
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 Lys Lys Val Lys Tyr Pro Lys Met Thr Asp Leu Ser Lys Gly Val Ile  
 210 215 220  
 Glu Glu Pro Lys  
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<210> 4601  
 <211> 916  
 <212> DNA  
 <213> Homo sapiens

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 180  
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 720  
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 916

&lt;210&gt; 4602

&lt;211&gt; 305

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4602

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Phe	Leu	Asn	Gly	Glu	Thr	Gln	Ile	Val	Ala	Asp	Glu	Ala	Phe	Cys	Asn
		20						25					30		
Ala	Val	Arg	Ser	Tyr	Tyr	Glu	Val	Phe	Leu	Lys	Ser	Asp	Arg	Val	Ala
		35				40						45			
Arg	Met	Val	Gln	Ser	Gly	Gly	Cys	Ser	Ala	Asn	Asp	Phe	Arg	Glu	Val
	50					55					60				
Phe	Lys	Lys	Asn	Ile	Glu	Lys	Arg	Val	Arg	Ser	Leu	Pro	Glu	Ile	Asp
65				70						75				80	
Gly	Leu	Ser	Lys	Glu	Thr	Val	Leu	Ser	Ser	Trp	Ile	Ala	Lys	Tyr	Asp
			85						90					95	
Ala	Ile	Tyr	Arg	Gly	Glu	Glu	Asp	Leu	Cys	Lys	Gln	Pro	Asn	Arg	Met
			100					105					110		
Ala	Leu	Ser	Ala	Val	Ser	Glu	Leu	Ile	Leu	Ser	Lys	Glu	Gln	Leu	Tyr
		115					120					125			
Glu	Met	Phe	Gln	Gln	Ile	Leu	Gly	Ile	Lys	Lys	Leu	Glu	His	Gln	Leu
	130					135					140				
Leu	Tyr	Asn	Ala	Cys	Gln	Leu	Asp	Asn	Ala	Asp	Glu	Gln	Ala	Ala	Gln
145				150						155				160	
Ile	Arg	Arg	Glu	Leu	Asp	Gly	Arg	Leu	Gln	Leu	Ala	Asp	Lys	Met	Ala
			165					170						175	
Lys	Glu	Arg	Lys	Phe	Pro	Lys	Phe	Ile	Ala	Lys	Asp	Met	Glu	Asn	Met
		180						185					190		
Tyr	Ile	Glu	Glu	Leu	Arg	Ser	Ser	Val	Asn	Leu	Leu	Met	Ala	Asn	Leu



195	200	205
Glu Ser Leu Pro Val Ser Lys Gly Gly Pro Glu Phe Lys Leu Gln Lys		
210	215	220
Leu Lys Arg Ser Gln Asn Ser Ala Phe Leu Asp Ile Gly Asp Glu Asn		
225	230	235
Glu Ile Gln Leu Ser Lys Ser Asp Val Val Leu Ser Phe Thr Leu Glu		
245	250	255
Ile Val Ile Met Glu Val Gln Gly Leu Lys Ser Val Ala Pro Asn Arg		
260	265	270
Ile Val Tyr Cys Thr Met Glu Val Glu Gly Glu Lys Leu Gln Thr Asp		
275	280	285
Gln Ala Glu Ala Ser Arg Pro Gln Trp Gly Asp Ser Gly Glu Phe His		
290	295	300
Pro		
305		

&lt;210&gt; 4603

&lt;211&gt; 2090

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4603

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960

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&lt;210&gt; 4604

&lt;211&gt; 666

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4604

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			20					25					30		
Ser	Ile	Leu	Asp	Ser	Leu	Glu	Pro	Gln	Ser	Leu	Ala	Ser	Leu	Leu	Ser
		35				40					45				
Glu	Ser	Glu	Ser	Pro	Gln	Glu	Ala	Gly	Arg	Gly	His	Pro	Ser	Phe	Leu
	50				55					60					
Pro	Gln	Gln	Lys	Glu	Ser	Ser	Glu	Ala	Ser	Glu	Leu	Ile	Leu	Tyr	Ser

65					70					75					80
Leu	Glu	Ala	Glu	Val	Thr	Val	Thr	Gly	Thr	Asp	Ser	Gln	Tyr	Cys	Arg
				85					90					95	
Lys	Glu	Val	Glu	Ala	Gly	Pro	Gly	Asp	Gln	Gln	Gly	Asp	Ser	Tyr	Leu
			100					105					110		
Arg	Val	Ser	Ser	Asp	Ser	Pro	Lys	Asp	Gln	Ser	Pro	Pro	Glu	Asp	Ser
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Gly	Glu	Ser	Glu	Ala	Asp	Leu	Glu	Cys	Ser	Phe	Ala	Ala	Ile	His	Ser
			130				135				140				
Pro	Ala	Pro	Pro	Pro	Asp	Pro	Ala	Pro	Arg	Phe	Ala	Thr	Ser	Leu	Pro
145					150					155					160
His	Phe	Pro	Gly	Cys	Ala	Gly	Pro	Thr	Glu	Asp	Glu	Leu	Ser	Leu	Pro
				165					170					175	
Glu	Gly	Pro	Ser	Val	Pro	Ser	Ser	Ser	Leu	Pro	Gln	Thr	Pro	Glu	Gln
			180						185				190		
Glu	Lys	Phe	Leu	Arg	His	His	Phe	Glu	Thr	Leu	Thr	Glu	Ser	Pro	Cys
			195				200					205			
Arg	Ala	Leu	Gly	Asp	Val	Glu	Ala	Ser	Glu	Ala	Glu	Asp	His	Phe	Phe
			210				215				220				
Asn	Pro	Arg	Leu	Ser	Ile	Ser	Thr	Gln	Phe	Leu	Ser	Ser	Leu	Gln	Lys
225					230					235					240
Ala	Ser	Arg	Phe	Thr	His	Thr	Phe	Pro	Pro	Arg	Ala	Thr	Gln	Cys	Leu
				245					250					255	
Val	Lys	Ser	Pro	Glu	Val	Lys	Leu	Met	Asp	Arg	Gly	Gly	Ser	Gln	Pro
			260					265					270		
Arg	Ala	Gly	Thr	Gly	Tyr	Ala	Ser	Pro	Asp	Arg	Thr	His	Val	Leu	Ala
			275					280				285			
Ala	Gly	Lys	Ala	Glu	Glu	Thr	Leu	Glu	Ala	Trp	Arg	Pro	Pro	Pro	Pro
			290				295				300				
Cys	Leu	Thr	Ser	Leu	Ala	Ser	Cys	Val	Pro	Ala	Ser	Ser	Val	Leu	Pro
305					310					315					320
Thr	Asp	Arg	Asn	Leu	Pro	Thr	Pro	Thr	Ser	Ala	Pro	Thr	Pro	Gly	Leu
				325					330					335	
Ala	Gln	Gly	Val	His	Ala	Pro	Ser	Thr	Cys	Ser	Tyr	Met	Glu	Ala	Thr
			340					345					350		
Ala	Ser	Ser	Arg	Ala	Arg	Ile	Ser	Arg	Ser	Ile	Ser	Leu	Gly	Asp	Ser
			355				360					365			
Glu	Gly	Pro	Ile	Val	Ala	Thr	Leu	Ala	Gln	Pro	Leu	Arg	Arg	Pro	Ser
			370				375				380				
Ser	Val	Gly	Glu	Leu	Ala	Ser	Leu	Gly	Gln	Glu	Leu	Gln	Ala	Ile	Thr
385					390					395					400
Thr	Ala	Thr	Thr	Pro	Ser	Leu	Asp	Ser	Glu	Gly	Gln	Glu	Pro	Ala	Leu
				405					410					415	
Arg	Ser	Trp	Gly	Asn	His	Glu	Ala	Arg	Ala	Asn	Leu	Arg	Leu	Thr	Leu
			420					425					430		
Ser	Ser	Ala	Cys	Asp	Gly	Leu	Leu	Leu	Pro	Pro	Val	Asp	Thr	Gln	Pro
			435				440					445			
Gly	Val	Thr	Val	Pro	Ala	Val	Ser	Phe	Pro	Ala	Pro	Ser	Pro	Val	Glu
			450				455				460				
Glu	Ser	Ala	Leu	Arg	Leu	His	Gly	Ser	Ala	Phe	Arg	Pro	Ser	Leu	Pro
465					470					475					480
Ala	Pro	Glu	Ser	Pro	Gly	Leu	Pro	Ala	His	Pro	Ser	Asn	Pro	Gln	Leu
				485					490					495	
Pro	Glu	Ala	Arg	Pro	Gly	Ile	Pro	Gly	Gly	Thr	Ala	Ser	Leu	Leu	Glu

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530	535	540
Leu Ser Gly Trp Gly Thr Ser Cys Thr Gly Cys Arg Pro Pro Ser Lys		
545	550	555
Lys Pro Ser Thr Phe Thr Val Cys Trp Ser Pro Val Ala Arg Trp Thr		
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Pro Gly Ser Ser Arg His Gly Leu Ser Trp Ser Pro Pro Ser Cys Gly		
580	585	590
Ser Thr Ala Ser Trp Arg Leu Asn Ala Trp Trp Gly Leu Val Trp Pro		
595	600	605
Gln Pro Arg Leu Cys Pro Ala Gln Asp Pro Arg Pro His Arg Arg Cys		
610	615	620
Thr Pro Trp Pro Ala Gln Thr Cys Arg Pro Cys Trp Asn Thr Thr Arg		
625	630	635
Ser Cys Trp Cys Arg Pro Cys Gly Gly Arg His Gly Gly Thr Glu Gly		
645	650	655
Ala Ala Pro Pro Pro Gln Pro Cys Cys Phe		
660	665	

&lt;210&gt; 4605

&lt;211&gt; 2998

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4605

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780

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&lt;210&gt; 4606

&lt;211&gt; 584

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4606

Ile	Glu	His	Lys	Glu	Glu	Asn	Asp	His	Lys	Val	Phe	Tyr	Gly	Gly	Asp
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Leu	Lys	Val	Asp	Cys	Val	Ala	Thr	Gly	Leu	Pro	Asn	Pro	Glu	Ile	Ser
			20					25					30		
Trp	Ser	Leu	Pro	Asp	Gly	Ser	Leu	Val	Asn	Ser	Phe	Met	Gln	Ser	Asp
		35					40					45			
Asp	Ser	Gly	Gly	Arg	Thr	Lys	Arg	Tyr	Val	Val	Phe	Asn	Asn	Gly	Thr
	50					55				60					
Leu	Tyr	Phe	Asn	Glu	Val	Gly	Met	Arg	Glu	Glu	Gly	Asp	Tyr	Thr	Cys
65				70					75					80	
Phe	Ala	Glu	Asn	Gln	Val	Gly	Lys	Asp	Glu	Met	Arg	Val	Arg	Val	Lys
			85						90					95	
Val	Val	Thr	Ala	Pro	Ala	Thr	Ile	Arg	Asn	Lys	Thr	Cys	Leu	Ala	Val
			100					105					110		
Gln	Val	Pro	Tyr	Gly	Asp	Val	Val	Thr	Val	Ala	Cys	Glu	Ala	Lys	Gly
	115					120						125			
Glu	Pro	Met	Pro	Lys	Val	Thr	Trp	Leu	Ser	Pro	Thr	Asn	Lys	Val	Ile
	130					135					140				
Pro	Thr	Ser	Ser	Glu	Lys	Tyr	Gln	Ile	Tyr	Gln	Asp	Gly	Thr	Leu	Leu
145				150					155					160	
Ile	Gln	Lys	Ala	Gln	Arg	Ser	Asp	Ser	Gly	Asn	Tyr	Thr	Cys	Leu	Val
			165					170						175	
Arg	Asn	Ser	Ala	Gly	Glu	Asp	Arg	Lys	Thr	Val	Trp	Ile	His	Val	Asn
	180						185					190			
Val	Gln	Pro	Pro	Lys	Ile	Asn	Gly	Asn	Pro	Asn	Pro	Ile	Thr	Thr	Val
	195					200					205				
Arg	Glu	Ile	Ala	Ala	Gly	Gly	Ser	Arg	Lys	Leu	Ile	Asp	Cys	Lys	Ala

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Glu Gly Ile Pro Thr Pro Arg Val Leu Trp Ala Phe Pro Glu Gly Val
225      230      235      240
Val Leu Pro Ala Pro Tyr Tyr Gly Asn Arg Ile Thr Val His Gly Asn
      245      250      255
Gly Ser Leu Asp Ile Arg Ser Leu Arg Lys Ser Asp Ser Val Gln Leu
      260      265      270
Val Cys Met Ala Arg Asn Glu Gly Gly Glu Ala Arg Leu Ile Leu Gln
      275      280      285
Leu Thr Val Leu Glu Pro Met Glu Lys Pro Ile Phe His Asp Pro Ile
      290      295      300
Ser Glu Lys Ile Thr Ala Met Ala Gly His Thr Ile Ser Leu Asn Cys
305      310      315      320
Ser Ala Ala Gly Thr Pro Thr Pro Ser Leu Val Trp Val Leu Pro Asn
      325      330      335
Gly Thr Asp Leu Gln Ser Gly Gln Gln Leu Gln Arg Phe Tyr His Lys
      340      345      350
Ala Asp Gly Met Leu His Ile Ser Gly Leu Ser Ser Val Asp Ala Gly
      355      360      365
Ala Tyr Arg Cys Val Ala Arg Asn Ala Ala Gly His Thr Glu Arg Leu
      370      375      380
Val Ser Leu Lys Val Gly Leu Lys Pro Glu Ala Asn Lys Gln Tyr His
385      390      395      400
Asn Leu Val Ser Ile Ile Asn Gly Glu Thr Leu Lys Leu Pro Cys Thr
      405      410      415
Pro Pro Gly Ala Gly Gln Gly Arg Phe Ser Trp Thr Leu Pro Asn Gly
      420      425      430
Met His Leu Glu Gly Pro Gln Thr Leu Gly Arg Val Ser Leu Leu Asp
      435      440      445
Asn Gly Thr Leu Thr Val Arg Glu Ala Ser Val Phe Asp Arg Gly Thr
      450      455      460
Tyr Val Cys Arg Met Glu Thr Glu Tyr Gly Pro Ser Val Thr Ser Ile
465      470      475      480
Pro Val Ile Val Ile Ala Tyr Pro Pro Arg Ile Thr Ser Glu Pro Thr
      485      490      495
Pro Val Ile Tyr Thr Arg Pro Gly Asn Thr Val Lys Leu Asn Cys Met
      500      505      510
Ala Met Gly Ile Pro Lys Ala Asp Ile Thr Trp Glu Leu Pro Asp Lys
      515      520      525
Ser His Leu Lys Ala Gly Val Gln Ala Arg Leu Tyr Gly Asn Arg Phe
      530      535      540
Leu His Pro Gln Gly Ser Leu Thr Ile Gln His Ala Thr Gln Arg Asp
545      550      555      560
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      565      570      575
Lys Thr Thr Tyr Ile His Val Phe
      580

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&lt;210&gt; 4607

&lt;211&gt; 456

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4607

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 300  
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<210> 4608

<211> 107

<212> PRT

<213> Homo sapiens

<400> 4608

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Cys	Asn	Cys	Arg	Gln	Glu	Met	Arg	Thr	Thr	Gln	Leu	Gly	Pro	Gly	Arg
			20					25				30			
Phe	Gln	Met	Thr	Gln	Glu	Val	Val	Cys	Asp	Glu	Cys	Pro	Asn	Val	Lys
		35					40				45				
Leu	Val	Asn	Glu	Glu	Arg	Thr	Leu	Glu	Val	Glu	Ile	Glu	Pro	Gly	Val
	50				55					60					
Arg	Asp	Gly	Met	Glu	Tyr	Pro	Phe	Ile	Gly	Glu	Gly	Glu	Pro	His	Val
65				70					75					80	
Asp	Gly	Xaa	Pro	Gly	Asp	Leu	Arg	Phe	Arg	Ile	Lys	Val	Val	Lys	His
			85				90						95		
Pro	Ile	Phe	Glu	Arg	Arg	Gly	Asp	Asp	Leu	Tyr					
			100				105								

<210> 4609

<211> 904

<212> DNA

<213> Homo sapiens

<400> 4609

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 120  
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 180  
 cgcttcctgg acaacttcag cagcgggccc cgcggtgcaa cctcggccga ggccttccta  
 240  
 gccgcccggc acggggctct gttcttgat cgcgctcgct ctgccttccc ctatgccac  
 300



cgcttcccac cccagacttg gctgtccgct ctgcggcctt cgggcccagc cctttcgggc  
 360  
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 420  
 taccaggagg ctgcggctgc aggcaccttc ctggcagtag agttcaccac tttggcggac  
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 904

&lt;210&gt; 4610

&lt;211&gt; 250

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4610

Xaa	Ala	Ala	Ala	Ala	Gln	Met	Ala	Glu	Met	Asp	Pro	Val	Ala	Glu	Phe
1				5					10					15	
Pro	Gln	Pro	Pro	Gly	Ala	Ala	Arg	Trp	Ala	Glu	Val	Met	Ala	Arg	Phe
			20					25					30		
Ala	Ala	Arg	Leu	Gly	Ala	Gln	Gly	Arg	Arg	Val	Val	Leu	Val	Thr	Ser
		35					40					45			
Gly	Gly	Thr	Lys	Val	Pro	Leu	Glu	Ala	Arg	Pro	Val	Arg	Phe	Leu	Asp
		50				55					60				
Asn	Phe	Ser	Ser	Gly	Arg	Arg	Gly	Ala	Thr	Ser	Ala	Glu	Ala	Phe	Leu
65					70					75				80	
Ala	Ala	Gly	Tyr	Gly	Val	Leu	Phe	Leu	Tyr	Arg	Ala	Arg	Ser	Ala	Phe
			85						90					95	
Pro	Tyr	Ala	His	Arg	Phe	Pro	Pro	Gln	Thr	Trp	Leu	Ser	Ala	Leu	Arg
		100						105					110		
Pro	Ser	Gly	Pro	Ala	Leu	Ser	Gly	Leu	Leu	Ser	Leu	Glu	Ala	Glu	Glu
		115					120					125			
Asn	Ala	Leu	Pro	Gly	Phe	Ala	Glu	Ala	Leu	Arg	Ser	Tyr	Gln	Glu	Ala
		130					135					140			
Ala	Ala	Ala	Gly	Thr	Phe	Leu	Ala	Val	Glu	Phe	Thr	Thr	Leu	Ala	Asp
145					150					155				160	
Tyr	Leu	His	Leu	Leu	Gln	Ala	Ala	Ala	Gln	Ala	Leu	Asn	Pro	Leu	Gly
			165						170					175	
Pro	Ser	Ala	Met	Phe	Tyr	Leu	Ala	Ala	Ala	Val	Ser	Asp	Phe	Tyr	Val
			180						185				190		
Pro	Val	Ser	Glu	Met	Pro	Glu	His	Lys	Ile	Gln	Ser	Ser	Gly	Gly	Pro

195	200	205
Leu Gln Gly Lys Val Gln Leu Glu Asp Ile Leu His His Leu Glu Lys		
210	215	220
Glu Glu Ile Asn Pro Leu Ala Thr Thr Glu Glu Gln Leu Cys Leu Val		
225	230	235
Leu Ile Pro Ala Ser Thr Val Lys Thr Gly		
245	250	

<210> 4611  
 <211> 1946  
 <212> DNA  
 <213> Homo sapiens

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 120  
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 180  
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 240  
 ccgcggcccc ggccgagcgc ggcggccgct gcgattgcag tcgcggcggc ggaggaagag  
 300  
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 360  
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 420  
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 720  
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 780  
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 1260  
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 1860  
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 1920  
 tgtttgaaaa aaaaaaaaaa aaaaaa  
 1946

&lt;210&gt; 4612

&lt;211&gt; 532

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4612

Met	Arg	Pro	Asp	Trp	Lys	Ala	Gly	Ala	Gly	Pro	Gly	Gly	Pro	Pro	Gln
1				5					10					15	
Lys	Pro	Ala	Pro	Ser	Ser	Gln	Arg	Lys	Pro	Pro	Ala	Arg	Pro	Ser	Ala
		20						25					30		
Ala	Ala	Ala	Ala	Ile	Ala	Val	Ala	Ala	Ala	Glu	Glu	Glu	Arg	Arg	Leu
		35					40					45			
Arg	Gln	Arg	Asn	Arg	Leu	Arg	Leu	Glu	Glu	Asp	Lys	Pro	Ala	Val	Glu
		50			55					60					
Arg	Cys	Leu	Glu	Glu	Leu	Val	Phe	Gly	Asp	Val	Glu	Asn	Asp	Glu	Asp
65					70				75					80	
Ala	Leu	Leu	Arg	Arg	Leu	Arg	Gly	Pro	Arg	Val	Gln	Glu	His	Glu	Asp
			85					90						95	
Ser	Gly	Asp	Ser	Glu	Val	Glu	Asn	Glu	Ala	Lys	Gly	Asn	Phe	Pro	Pro
			100					105					110		
Gln	Lys	Lys	Pro	Val	Trp	Val	Asp	Glu	Glu	Asp	Glu	Asp	Glu	Glu	Met
		115					120					125			
Val	Asp	Met	Met	Asn	Asn	Arg	Phe	Arg	Lys	Asp	Met	Met	Lys	Asn	Ala
		130				135					140				
Ser	Glu	Ser	Lys	Leu	Ser	Lys	Asp	Asn	Leu	Lys	Lys	Arg	Leu	Lys	Glu
145					150				155					160	
Glu	Phe	Gln	His	Ala	Met	Gly	Gly	Val	Pro	Ala	Trp	Ala	Glu	Thr	Thr

165 170 175  
 Lys Arg Lys Thr Ser Ser Asp Asp Glu Ser Glu Glu Asp Glu Asp Asp  
 180 185 190  
 Leu Leu Gln Arg Thr Gly Asn Phe Ile Ser Thr Ser Thr Ser Leu Pro  
 195 200 205  
 Arg Gly Ile Leu Lys Met Lys Asn Cys Gln His Ala Asn Ala Glu Arg  
 210 215 220  
 Pro Thr Val Ala Arg Ile Ser Ser Val Gln Phe His Pro Gly Ala Gln  
 225 230 235 240  
 Ile Val Met Val Ala Gly Leu Asp Asn Ala Val Ser Leu Phe Gln Val  
 245 250 255  
 Asp Gly Lys Thr Asn Pro Lys Ile Gln Ser Ile Tyr Leu Glu Arg Phe  
 260 265 270  
 Pro Ile Phe Lys Ala Cys Phe Ser Ala Asn Gly Glu Glu Val Leu Ala  
 275 280 285  
 Thr Ser Thr His Ser Lys Val Leu Tyr Val Tyr Asp Met Leu Ala Gly  
 290 295 300  
 Lys Leu Ile Pro Val His Gln Val Arg Gly Leu Lys Glu Lys Ile Val  
 305 310 315 320  
 Arg Ser Phe Glu Val Ser Pro Asp Gly Ser Phe Leu Leu Ile Asn Gly  
 325 330 335  
 Ile Ala Gly Tyr Leu His Leu Leu Ala Met Lys Thr Lys Glu Leu Ile  
 340 345 350  
 Gly Ser Met Lys Ile Asn Gly Arg Val Ala Ala Ser Thr Phe Ser Ser  
 355 360 365  
 Asp Ser Lys Lys Val Tyr Ala Ser Ser Gly Asp Gly Glu Val Tyr Val  
 370 375 380  
 Trp Asp Val Asn Ser Arg Lys Cys Leu Asn Arg Phe Val Asp Glu Gly  
 385 390 395 400  
 Ser Leu Tyr Gly Leu Ser Ile Ala Thr Ser Arg Asn Gly Gln Tyr Val  
 405 410 415  
 Ala Cys Gly Ser Asn Cys Gly Val Val Asn Ile Tyr Asn Gln Asp Ser  
 420 425 430  
 Cys Leu Gln Glu Thr Asn Pro Lys Pro Ile Lys Ala Ile Met Asn Leu  
 435 440 445  
 Val Thr Gly Val Thr Ser Leu Thr Phe Asn Pro Thr Thr Glu Ile Leu  
 450 455 460  
 Ala Ile Ala Ser Glu Lys Met Lys Glu Ala Val Arg Leu Val His Leu  
 465 470 475 480  
 Pro Ser Cys Thr Val Phe Ser Asn Phe Pro Val Ile Lys Asn Lys Asn  
 485 490 495  
 Ile Ser His Val His Thr Met Asp Phe Ser Pro Arg Ser Gly Tyr Phe  
 500 505 510  
 Ala Leu Gly Asn Glu Lys Gly Lys Ala Leu Met Tyr Arg Leu His His  
 515 520 525  
 Tyr Ser Asp Phe  
 530

<210> 4613  
 <211> 454  
 <212> DNA  
 <213> Homo sapiens

<400> 4613

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 120  
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 180  
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 300  
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 360  
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 454

<210> 4614

<211> 117

<212> PRT

<213> Homo sapiens

<400> 4614

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Pro	Val	Thr	Cys	Leu	Ala	Pro	Thr	Ser	Asn	Glu	Phe	Thr	Arg	Gly	Asn
			20					25					30		
Glu	Phe	Thr	Asn	Gly	Asn	Leu	Thr	Met	Ser	Asn	Glu	Phe	His	Cys	Lys
			35				40					45			
Asp	Phe	Leu	Ile	Phe	Thr	Thr	Gln	Ile	Leu	Thr	Ile	Leu	Gln	Leu	Arg
	50					55				60					
Ser	Leu	Asn	Ile	Ile	Tyr	Asn	Lys	Gln	Asn	Leu	Val	Asn	Leu	Gln	Lys
65				70				75						80	
Ser	Asn	Ala	Leu	Lys	Lys	His	Gln	Ser	Leu	Cys	Met	Cys	Arg	Thr	Asp
			85					90					95		
Pro	Ala	Pro	Gln	Gly	Asn	Thr	Ala	Gly	Thr	Val	Pro	Arg	Thr	Leu	Thr
			100					105					110		
Ser	Val	Ser	Leu	Leu											
			115												

<210> 4615

<211> 1350

<212> DNA

<213> Homo sapiens

<400> 4615

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 120  
 aaataaaagc gttgcagctg tggaaggaga tagaaactcg acatcctgga ttggctgatg  
 180  
 ttagaaatca gataatatgt gctgttcgtc aagaatatgt cgagcttgga gatcagctcc  
 240

tcgtgcttca gcctggagac gaaattgccg ttatcccccc cattagtgga ggatagtgct  
 300  
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 360  
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 420  
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 480  
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 540  
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 660  
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 720  
 atatatgaag agtcatcaac ttggaaagga aacaaagagt gcttttgggc atccaacagt  
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 900  
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 1080  
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 1200  
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 1320  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa  
 1350

&lt;210&gt; 4616

&lt;211&gt; 188

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4616

Met	Ser	Ser	Leu	Glu	Ile	Ser	Ser	Ser	Cys	Phe	Ser	Leu	Glu	Thr	Lys
1				5					10					15	
Leu	Pro	Leu	Ser	Pro	Pro	Leu	Val	Glu	Asp	Ser	Ala	Phe	Glu	Pro	Ser
		20						25					30		
Arg	Lys	Asp	Met	Asp	Glu	Val	Glu	Glu	Lys	Ser	Lys	Asp	Val	Ile	Asn
		35					40					45			
Phe	Thr	Ala	Glu	Lys	Leu	Ser	Val	Asp	Glu	Val	Ser	Gln	Leu	Val	Ile
	50					55					60				
Ser	Pro	Leu	Cys	Gly	Ala	Ile	Ser	Leu	Phe	Val	Gly	Thr	Thr	Arg	Asn

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<210> 4617
<211> 2266
<212> DNA
<213> Homo sapiens
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420
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480
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960

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 2220  
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 2266

&lt;210&gt; 4618

&lt;211&gt; 197

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4618

Met Phe Leu Asp Ser Lys Glu Glu Gly Thr Ser Gln Ala Pro Asn Lys  
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 Asp Pro Thr Ala Ala Ala Ala Leu Asn Gly Gly His Cys Leu Ala



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<210> 4620
<211> 103
<212> PRT
<213> Homo sapiens
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&lt;400&gt; 4620

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Thr Lys Phe His Arg Leu Phe Leu Leu Pro Thr Gly Tyr Gly Gln Gly
      20           25           30
Leu Gln Ala Arg Pro Asn Pro Arg Phe Pro Gly Arg Cys Thr Pro Gly
      35           40           45
Trp Glu Lys Leu Thr Asn Glu Ser Ser Trp Gln Pro Pro Gln Ala Pro
      50           55           60
Pro Asp Trp Ala Ser Trp Leu Cys Cys Gln Asp Tyr Asp Pro Leu Pro
65           70           75           80
Glu Ser Arg Arg Ser Pro Gln Ala Glu Arg Tyr Arg His Leu Cys Pro
      85           90           95
Tyr Leu Asn Gln Glu Val Pro
      100

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&lt;210&gt; 4621

&lt;211&gt; 2588

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4621

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600
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840
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960

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1380  
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2400  
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2460  
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<210> 4622  
<211> 403  
<212> PRT  
<213> Homo sapiens

<400> 4622  
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Ile Gly Lys Lys Gly Glu Thr Val Lys Arg Ile Arg Glu Gln Ser Ser  
35 40 45  
Ala Arg Ile Thr Ile Ser Glu Gly Ser Cys Pro Glu Arg Ile Thr Thr  
50 55 60  
Ile Thr Gly Ser Thr Ala Ala Val Phe His Ala Val Ser Met Ile Ala  
65 70 75 80  
Phe Lys Leu Asp Glu Asp Leu Cys Ala Ala Pro Ala Asn Gly Gly Asn  
85 90 95  
Val Ser Arg Pro Pro Val Thr Leu Arg Leu Val Ile Pro Ala Ser Gln  
100 105 110  
Cys Gly Ser Leu Ile Gly Lys Ala Gly Thr Lys Ile Lys Glu Ile Arg  
115 120 125  
Glu Thr Thr Gly Ala Gln Val Gln Val Ala Gly Asp Leu Leu Pro Asn  
130 135 140  
Ser Thr Glu Arg Ala Val Thr Val Ser Gly Val Pro Asp Ala Ile Ile  
145 150 155 160  
Leu Cys Val Arg Gln Ile Cys Ala Val Ile Leu Glu Ser Pro Pro Lys  
165 170 175  
Gly Ala Thr Ile Pro Tyr His Pro Ser Leu Ser Leu Gly Thr Val Leu  
180 185 190  
Leu Ser Ala Asn Gln Gly Phe Ser Val Gln Gly Gln Tyr Gly Ala Val  
195 200 205  
Thr Pro Ala Glu Val Thr Lys Leu Gln Gln Leu Ser Ser His Ala Val  
210 215 220  
Pro Phe Ala Thr Pro Ser Val Val Pro Gly Leu Asp Pro Gly Thr Gln  
225 230 235 240  
Thr Ser Ser Gln Glu Phe Leu Val Pro Asn Asp Leu Ile Gly Cys Val  
245 250 255  
Ile Gly Arg Gln Gly Ser Lys Ile Ser Glu Ile Arg Gln Met Ser Gly  
260 265 270  
Ala His Ile Lys Ile Gly Asn Gln Ala Glu Gly Ala Gly Glu Arg His  
275 280 285  
Val Thr Ile Thr Gly Ser Pro Val Ser Ile Ala Leu Ala Gln Tyr Leu  
290 295 300  
Ile Thr Ala Cys Leu Glu Thr Ala Lys Ser Thr Ser Gly Gly Thr Pro  
305 310 315 320  
Gly Ser Ala Pro Ala Asp Leu Pro Thr Pro Phe Ser Pro Pro Leu Thr  
325 330 335  
Ala Leu Pro Thr Ala Pro Pro Gly Leu Leu Gly Thr Pro Tyr Ala Ile  
340 345 350  
Ser Leu Ser Asn Phe Ile Gly Leu Lys Pro Val Pro Phe Leu Ala Leu

	355		360		365	
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Ser	Pro	Tyr				

<210> 4623  
 <211> 2220  
 <212> DNA  
 <213> Homo sapiens

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 240  
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 300  
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 420  
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 960  
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 2160  
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 2220

&lt;210&gt; 4624

&lt;211&gt; 189

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4624

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 20 25 30  
 Asp Pro Trp Lys Glu Glu Thr Asp Thr Asp Leu Glu Val Val Leu Glu  
 35 40 45  
 Lys Lys Gly Asn Met Asp Glu Ala His Ile Asp Gln Val Arg Arg Lys  
 50 55 60  
 Ala Leu Gln Glu Glu Ile Asp Arg Glu Ser Gly Lys Thr Glu Ala Ser  
 65 70 75 80  
 Glu Thr Arg Lys Trp Thr Gly Thr Gln Phe Gly Gln Trp Asp Thr Ala  
 85 90 95  
 Gly Phe Glu Asn Glu Asp Gln Lys Leu Lys Phe Leu Arg Leu Met Gly

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      100      105      110
Gly Phe Lys Asn Leu Ser Pro Ser Phe Ser Arg Pro Ala Ser Thr Ile
      115      120      125
Ala Arg Pro Asn Met Ala Leu Gly Lys Lys Ala Ala Asp Ser Leu Gln
      130      135      140
Gln Asn Leu Gln Arg Asp Tyr Asp Arg Ala Met Ser Trp Lys Tyr Ser
145      150      155      160
Arg Gly Ala Gly Leu Gly Phe Ser Thr Ala Pro Asn Lys Ile Phe Tyr
      165      170      175
Ile Asp Arg Asn Ala Ser Lys Ser Val Lys Leu Glu Asp
      180      185

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&lt;210&gt; 4625

&lt;211&gt; 334

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4625

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240
ctcctgcctg gggacaggaa gcccctgtac cattatgggc ggggcatgaa tcccgtgac
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334

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&lt;210&gt; 4626

&lt;211&gt; 111

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4626

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Arg Glu Gln Arg Lys Leu Gln Glu Lys Glu Gln Gln Arg Arg Leu Glu
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Asp Met Gln Ala Leu Arg Arg Glu Glu Glu Arg Arg Gln Ala Glu Arg
      20      25      30
Glu Gln Glu Tyr Lys Arg Lys Gln Leu Glu Glu Gln Arg Gln Ser Glu
      35      40      45
Arg Leu Gln Arg Gln Leu Gln Gln Glu His Ala Tyr Leu Lys Ser Leu
      50      55      60
Gln Gln Gln Gln Gln Gln Gln Gln Leu Gln Lys Gln Gln Gln Gln
      65      70      75      80
Leu Leu Pro Gly Asp Arg Lys Pro Leu Tyr His Tyr Gly Arg Gly Met
      85      90      95
Asn Pro Ala Asp Lys Pro Ala Trp Ala Arg Glu Gly Glu Glu Arg
      100      105      110

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&lt;210&gt; 4627

&lt;211&gt; 1736

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4627

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180  
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240  
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360  
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420  
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<210> 4628

<211> 469

<212> PRT

<213> Homo sapiens

<400> 4628

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			20					25					30		
Pro	Glu	Ala	Lys	Gln	Glu	Ile	Leu	Glu	Asn	Lys	Asp	Val	Val	Val	Gln
		35					40					45			
His	Val	His	Phe	Asp	Gly	Leu	Gly	Arg	Thr	Lys	Asp	Asp	Ile	Ile	Ile
	50					55					60				
Cys	Glu	Ile	Gly	Asp	Val	Phe	Lys	Ala	Lys	Asn	Leu	Ile	Glu	Val	Met
65					70					75					80
Arg	Lys	Ser	His	Glu	Ala	Arg	Glu	Lys	Leu	Leu	Arg	Leu	Gly	Ile	Phe
			85						90					95	
Arg	Gln	Val	Asp	Val	Leu	Ile	Asp	Thr	Cys	Gln	Gly	Asp	Gly	Ala	Leu
			100					105					110		
Pro	Asn	Gly	Leu	Asp	Val	Thr	Phe	Glu	Val	Thr	Glu	Leu	Arg	Arg	Leu
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Thr	Gly	Ser	Tyr	Asn	Thr	Met	Val	Gly	Asn	Asn	Glu	Gly	Ser	Met	Val
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Leu	Gly	Leu	Lys	Leu	Pro	Asn	Leu	Leu	Gly	Arg	Ala	Glu	Lys	Val	Thr
145					150					155					160
Phe	Gln	Phe	Ser	Tyr	Gly	Thr	Lys	Glu	Thr	Ser	Tyr	Gly	Leu	Ser	Phe
			165					170						175	
Phe	Lys	Pro	Arg	Pro	Gly	Asn	Phe	Glu	Arg	Asn	Phe	Ser	Val	Asn	Leu
			180					185					190		
Tyr	Lys	Val	Thr	Gly	Gln	Phe	Pro	Trp	Ser	Ser	Leu	Arg	Glu	Thr	Asp
	195					200						205			
Arg	Gly	Met	Ser	Ala	Glu	Tyr	Ser	Phe	Pro	Ile	Trp	Lys	Thr	Ser	His
	210					215					220				
Thr	Val	Lys	Trp	Glu	Gly	Val	Trp	Arg	Glu	Leu	Gly	Cys	Leu	Ser	Arg
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Thr	Ala	Ser	Phe	Ala	Val	Arg	Lys	Glu	Ser	Gly	His	Ser	Leu	Lys	Ser
			245					250						255	
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		260						265					270		
Pro	Arg	Arg	Gly	Ala	Leu	Leu	Lys	Val	Asn	Gln	Glu	Leu	Ala	Gly	Tyr
	275						280					285			
Thr	Gly	Gly	Asp	Val	Ser	Phe	Ile	Lys	Glu	Asp	Phe	Glu	Leu	Gln	Leu
	290					295					300				
Asn	Lys	Gln	Leu	Ile	Phe	Asp	Ser	Val	Phe	Ser	Ala	Ser	Phe	Trp	Gly

305					310					315					320	
Gly	Met	Leu	Val	Pro	Ile	Gly	Asp	Lys	Pro	Ser	Ser	Ile	Ala	Asp	Arg	
				325					330					335		
Phe	Tyr	Leu	Gly	Gly	Pro	Thr	Ser	Val	Arg	Gly	Phe	Ser	Met	His	Ser	
				340					345					350		
Ile	Gly	Pro	Gln	Ser	Glu	Gly	Asp	Tyr	Leu	Gly	Gly	Glu	Ala	Tyr	Trp	
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Ala	Gly	Gly	Leu	His	Leu	Tyr	Thr	Pro	Leu	Pro	Phe	Arg	Pro	Gly	Gln	
				370					375					380		
Gly	Gly	Phe	Gly	Glu	Leu	Phe	Arg	Thr	His	Phe	Phe	Leu	Asn	Ala	Gly	
				385					390					395		
Asn	Leu	Cys	Asn	Leu	Asn	Tyr	Gly	Glu	Gly	Pro	Lys	Ala	His	Ile	Arg	
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Lys	Leu	Ala	Glu	Cys	Ile	Arg	Trp	Ser	Tyr	Gly	Ala	Gly	Ile	Val	Leu	
				420					425					430		
Arg	Leu	Gly	Asn	Ile	Ala	Arg	Leu	Glu	Leu	Asn	Tyr	Cys	Val	Pro	Met	
				435					440					445		
Gly	Val	Gln	Thr	Gly	Asp	Arg	Ile	Cys	Asp	Gly	Val	Gln	Phe	Gly	Ala	
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Gly	Ile	Arg	Phe	Leu												
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<210> 4629
<211> 706
<212> DNA
<213> Homo sapiens
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706

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<211> 140  
 <212> PRT  
 <213> Homo sapiens

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 35 40 45  
 Ser Trp Ala Leu Arg Val Ser Val Phe Pro Gln Ile Gly Lys Met Arg  
 50 55 60  
 Gly Arg Gly Gly Tyr Trp Gly Gln Ala Ser Ala Gln Pro Trp Val Leu  
 65 70 75 80  
 Leu Glu Pro Gly Leu Glu Pro Glu Val Gly Arg Val Ser Lys Leu Ser  
 85 90 95  
 Ser Trp Ile Pro Ile Cys Arg Thr Ala Pro Arg Thr Arg Ser Gly Val  
 100 105 110  
 Arg Ala His Pro Leu Ala Arg Ile Leu Gly Ser Leu Gly His Lys Ala  
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 130 135 140

<210> 4631  
 <211> 2756  
 <212> DNA  
 <213> Homo sapiens

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&lt;210&gt; 4632

&lt;211&gt; 372

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4632

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Gly	Ala	Glu	Glu	Asp	Arg	Ala	Arg	Phe	Phe	Leu	Glu	Ser	Ala	Gly	Trp
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Asp	Leu	Gln	Ile	Ala	Leu	Ala	Ser	Phe	Tyr	Glu	Asp	Gly	Gly	Asp	Glu
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Thr	Ala	Pro	Ser	Asp	Asn	Arg	Val	Thr	Ser	Phe	Arg	Asp	Leu	Ile	His
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Asp	Gln	Asp	Glu	Asp	Glu	Glu	Glu	Glu	Glu	Gly	Gln	Arg	Ser	Arg	Phe
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Tyr	Ala	Gly	Gly	Ser	Glu	Arg	Ser	Gly	Gln	Gln	Ile	Val	Gly	Pro	Pro
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Phe	Ser	Leu	Asp	Asn	Gly	Glu	Leu	Arg	Ser	Tyr	Gln	Asp	Pro	Ser	Asn
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Thr	Ser	Phe	Ile	Leu	Met	Thr	Thr	Phe	Pro	Asn	Lys	Glu	Leu	Ala	Asp
			340					345					350		
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Gln	Arg	Leu	Thr												
	370														

&lt;210&gt; 4633

&lt;211&gt; 873

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4633

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&lt;210&gt; 4634

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 <212> PRT  
 <213> Homo sapiens

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 Ala Asn Leu Gly Lys Phe Leu Glu Leu Arg Ser His Gln Ser Arg  
 35 40 45  
 Pro Ala Lys Cys Leu Thr Ile Met Trp Ala Leu Gly Gln Ala Gly Phe  
 50 55 60  
 Ala Asn Leu Thr Glu Gly Leu Lys Val Trp Leu Gly Ile Met Leu Pro  
 65 70 75 80  
 Val Leu Gly Ile Lys Ser Leu Ser Pro Phe Ala Ile Thr Tyr Leu Asp  
 85 90 95  
 Arg Leu Leu Leu Met His Pro Asn Leu Thr Lys Gly Phe Gly Met Ile  
 100 105 110  
 Gly Pro Lys Asp Phe Phe Pro Leu Leu Asp Phe Ala Tyr Met Pro Asn  
 115 120 125  
 Asn Ser Leu Thr Pro Ser Leu Gln Glu Gln Leu Cys Gln Leu Tyr Pro  
 130 135 140  
 Arg Leu Lys Val Leu Ala Phe Gly Ala Lys Pro Asp Ser Thr Leu His  
 145 150 155 160  
 Thr Tyr Phe Pro Ser Phe Leu Ser Arg Ala Thr Pro Ser Cys Pro Pro  
 165 170 175  
 Glu Met Lys Lys Glu Leu Leu Ser Ser Leu Thr Glu Cys Leu Thr Val  
 180 185 190  
 Asp Pro Leu Ser Ala Ser Val Trp Arg Gln Leu Tyr Pro Lys His Leu  
 195 200 205  
 Ser Gln Ser Ser Leu Leu Leu Glu His Leu Leu Ser Ser Trp Glu Gln  
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 Ile Pro Lys Lys Val Gln Lys Ser Leu Gln Glu Thr Ile Gln Ser Leu  
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<210> 4635  
 <211> 384  
 <212> DNA  
 <213> Homo sapiens

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 Lys Glu Val Lys Trp Gly Pro Arg Arg Lys Ala Gly Gly Val Trp Ala  
 35 40 45  
 Glu Pro Ala Ser Gly Gly Leu Pro Pro Pro Glu Asp Glu Phe Cys Ser  
 50 55 60  
 Pro Gly Val Cys Thr Leu Thr Leu Ala His Ser Leu Thr His Lys Thr  
 65 70 75 80  
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 <212> DNA  
 <213> Homo sapiens

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&lt;210&gt; 4638

<211> 446  
 <212> PRT  
 <213> Homo sapiens

<400> 4638

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Thr Lys Ala Gly Tyr Lys Leu Phe Ser Leu Ser Ser Val Glu Gln Leu
      35           40           45
Asp Gln Val His Gly Ser Asn Glu Ile Pro Asp Val Tyr Ile Val Glu
      50           55           60
Arg Leu Phe Ser Ser Ser Leu Val Val Val Val Ser His Thr Lys Pro
      65           70           75           80
Arg Gln Met Asn Val Tyr His Phe Lys Lys Gly Thr Glu Ile Cys Asn
      85           90           95
Tyr Ser Tyr Ser Ser Asn Ile Leu Ser Ile Arg Leu Asn Arg Gln Arg
      100          105          110
Leu Leu Val Cys Leu Glu Glu Ser Ile Tyr Ile His Asn Ile Lys Asp
      115          120          125
Met Lys Leu Leu Lys Thr Leu Leu Asp Ile Pro Ala Asn Pro Thr Gly
      130          135          140
Leu Cys Ala Leu Ser Ile Asn His Ser Asn Ser Tyr Leu Ala Tyr Pro
      145          150          155          160
Gly Ser Leu Thr Ser Gly Glu Ile Val Leu Tyr Asp Gly Asn Ser Leu
      165          170          175
Lys Thr Val Cys Thr Ile Ala Ala His Glu Gly Thr Leu Ala Ala Ile
      180          185          190
Thr Phe Asn Ala Ser Gly Ser Lys Leu Ala Ser Ala Ser Glu Lys Gly
      195          200          205
Thr Val Ile Arg Val Phe Ser Val Pro Asp Gly Gln Lys Leu Tyr Glu
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Phe Arg Arg Gly Met Lys Arg Tyr Val Thr Ile Ser Ser Leu Val Phe
      225          230          235          240
Ser Met Asp Ser Gln Phe Leu Cys Ala Ser Ser Asn Thr Glu Thr Val
      245          250          255
His Ile Phe Lys Leu Glu Gln Val Thr Asn Ser Arg Pro Glu Glu Pro
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Ser Thr Trp Ser Gly Tyr Met Gly Lys Met Phe Met Ala Ala Thr Asn
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Tyr Leu Pro Thr Gln Val Ser Asp Met Met His Gln Asp Arg Ala Phe
      290          295          300
Ala Thr Ala Arg Leu Asn Phe Ser Gly Gln Arg Asn Ile Cys Thr Leu
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Ser Thr Ile Gln Lys Leu Pro Arg Leu Leu Val Ala Ser Ser Ser Gly
      325          330          335
His Leu Tyr Met Tyr Asn Leu Asp Pro Gln Asp Gly Gly Glu Cys Val
      340          345          350
Leu Ile Lys Thr His Ser Leu Leu Gly Ser Gly Thr Thr Glu Glu Asn
      355          360          365
Lys Glu Asn Asp Leu Arg Pro Ser Leu Pro Gln Ser Tyr Ala Ala Thr
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Val Ala Arg Pro Ser Ala Ser Ser Ala Ser Thr Val Pro Gly Tyr Ser

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			420					425					430		
Ile	Leu	Cys	Arg	Gly	Asn	Gln	Lys	Gly	Lys	Thr	Lys	Gln	Ser		
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&lt;210&gt; 4639

&lt;211&gt; 1007

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4639

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1007

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&lt;210&gt; 4640

&lt;211&gt; 71

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4640

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Met Asn Thr Ile Gly Phe His Lys Ser Phe Cys Cys Cys Leu Asp Ser
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Pro Cys Phe Phe Leu Glu Arg Asn Ile Pro Asn Phe Leu Leu Leu Leu
      20           25           30
Leu Arg Arg Ser Phe Ala Leu Val Ala Gln Ala Arg Val Gln Trp Arg
      35           40           45
Asp Leu Ser Ser Leu Gln Pro Pro Pro Arg Leu Lys Arg Phe Ser
      50           55           60
His Leu Ser Leu Pro Ser Ser
65           70

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&lt;210&gt; 4641

&lt;211&gt; 1873

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4641

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&lt;210&gt; 4642

&lt;211&gt; 306

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4642

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Gln	Trp	Asn	Tyr	Cys	Thr	Leu	Ser	Gln	Glu	Ile	Leu	Arg	Arg	Pro	Ile
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<210> 4643

<211> 1125

<212> DNA

<213> Homo sapiens

<400> 4643

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<210> 4644

<211> 270

<212> PRT

<213> Homo sapiens

<400> 4644

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Gly	Ala	Arg	Val	Val	Ile	Cys	Asp	Lys	Asp	Glu	Ser	Gly	Gly	Arg	Ala
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Gln	Glu	Asp	Asp	Met	Lys	Thr	Leu	Val	Ser	Glu	Thr	Ile	Arg	Arg	Phe
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Gln	Arg	Pro	Glu	Glu	Thr	Ser	Ala	Gln	Gly	Phe	Arg	Gln	Leu	Leu	Glu
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&lt;210&gt; 4645

&lt;211&gt; 1725

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4645

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<210> 4646
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<212> PRT
<213> Homo sapiens
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3842

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Glu Gly Ile Lys Gln Leu Leu Lys Gln Gly Ser Val Gln Lys Val Tyr
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&lt;210&gt; 4647

&lt;211&gt; 791

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4647

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&lt;210&gt; 4648

&lt;211&gt; 188

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4648

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Arg	Thr	Ile	Leu	Met	Arg	Lys	Glu	Gly	Glu	Ser	Ala	Lys	Ser	Ile	Asn	
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Glu	Met	Leu	Leu	Ser	Arg	Leu	Ser	Arg	Tyr	Arg	Ala	Ser	Pro	Ser	Ala	
				85					90					95		
Thr	Leu	Ala	Ala	Leu	Thr	Gly	Ser	Thr	Ile	Ser	Asn	Thr	Leu	Lys	Glu	
			100					105					110			
Asp	Gln	Ala	Ala	Asn	Thr	Ser	Cys	Gly	Leu	Pro	Leu	Lys	Met	Leu	Arg	
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Lys	Thr	Pro	Ile	Tyr	Thr	Cys	Gly	Thr	Tyr	Leu	Val	Met	Leu	Val	Pro	
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Pro	Pro	Gly	Gly	Ser	Gly	Ser	Ser	Ala	Thr	Arg	Ser	Leu	Phe	Gly	Gly	
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<210> 4649

**<211> 3276**

<212> DNA

<213> Homo sapiens

<400> 4649

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<211> 965

<212> PRT

<213> Homo sapiens

<400> 4650

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Ala	Asn	Ile	Glu	Pro	Met	Tyr	Gln	Tyr	Ser	Leu	Thr	Trp	Phe	Ile	Asn		
	165					170					175						
Leu	Tyr	Met	His	Ser	Leu	Thr	His	Ser	Thr	Lys	Ser	Glu	Glu	Leu	Asn		
	180					185					190						
Leu	Arg	Ile	Lys	Tyr	Ile	Ile	Asp	His	Phe	Thr	Leu	Ser	Ile	Tyr	Asn		
	195					200					205						
Asn	Val	Cys	Arg	Ser	Leu	Phe	Glu	Lys	Asp	Lys	Leu	Leu	Phe	Ser	Leu		
	210					215					220						
Leu	Leu	Thr	Ile	Gly	Ile	Met	Lys	Gln	Lys	Lys	Glu	Ile	Thr	Glu	Glu		
225						230					235						
Val	Trp	Tyr	Phe	Leu	Leu	Thr	Gly	Gly	Ile	Ala	Leu	Asp	Asn	Pro	Tyr		
	245					250					255						
Pro	Asn	Pro	Ala	Pro	Gln	Trp	Leu	Ser	Glu	Lys	Ala	Trp	Ala	Glu	Ile		
	260					265					270						
Val	Arg	Ala	Ser	Ala	Leu	Pro	Lys	Leu	His	Gly	Leu	Met	Glu	His	Leu		
	275					280					285						
Glu	Gln	Asn	Leu	Gly	Glu	Trp	Lys	Leu	Ile	Tyr	Asp	Ser	Ala	Trp	Pro		
	290					295					300						
His	Glu	Glu	Gln	Leu	Pro	Gly	Ser	Trp	Lys	Phe	Ser	Gln	Gly	Leu	Glu		
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Lys	Met	Val	Ile	Leu	Arg	Cys	Leu	Arg	Pro	Asp	Lys	Met	Val	Pro	Ala		
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Val	Arg	Glu	Phe	Ile	Ala	Glu	His	Met	Gly	Lys	Leu	Tyr	Ile	Glu	Ala		
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Pro	Thr	Phe	Asp	Leu	Gln	Gly	Ser	Tyr	Asn	Asp	Ser	Ser	Cys	Cys	Ala		
	355					360					365						
Pro	Leu	Ile	Phe	Val	Leu	Ser	Pro	Ser	Ala	Asp	Pro	Met	Ala	Gly	Leu		
	370					375					380						
Leu	Lys	Phe	Ala	Asp	Asp	Leu	Gly	Met	Gly	Gly	Thr	Arg	Thr	Gln	Thr		
385						390					395						
Ile	Ser	Leu	Gly	Gln	Gly	Gln	Gly	Pro	Ile	Ala	Ala	Lys	Met	Ile	Asn		
	405					410					415						
Asn	Ala	Ile	Lys	Asp	Gly	Thr	Trp	Val	Val	Leu	Gln	Asn	Cys	His	Leu		
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Ala	Ala	Ser	Trp	Met	Pro	Thr	Leu	Glu	Lys	Ile	Cys	Glu	Glu	Val	Ile		
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Val	Pro	Glu	Ser	Thr	Asn	Ala	Arg	Phe	Arg	Leu	Trp	Leu	Thr	Ser	Tyr		
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Pro	Ser	Glu	Lys	Phe	Pro	Val	Ser	Ile	Leu	Gln	Asn	Gly	Ile	Lys	Met		
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Thr	Asn	Glu	Pro	Pro	Lys	Gly	Leu	Arg	Ala	Asn	Leu	Leu	Arg	Ser	Tyr		
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Ala	Val	Met	Trp	Gln	Lys	Met	Leu	Phe	Gly	Leu	Cys	Phe	Phe	His	Ala		
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Val	Val	Gln	Glu	Arg	Arg	Asn	Phe	Gly	Pro	Leu	Gly	Trp	Asn	Ile	Pro		
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Tyr	Glu	Phe	Asn	Glu	Ser	Asp	Leu	Arg	Ile	Ser	Met	Trp	Gln	Ile	Gln		
545						550					555						
Met	Phe	Leu	Asn	Asp	Tyr	Lys	Glu	Val	Pro	Phe	Asp	Ala	Leu				

565 570 575  
 Leu Thr Gly Glu Cys Asn Tyr Gly Gly Arg Val Thr Asp Asp Lys Asp  
 580 585 590  
 Arg Arg Leu Leu Leu Ser Leu Leu Ser Met Phe Tyr Cys Lys Glu Ile  
 595 600 605  
 Glu Glu Asp Tyr Tyr Ser Leu Ala Pro Gly Asp Thr Tyr Tyr Ile Pro  
 610 615 620  
 Pro His Gly Ser Tyr Gln Ser Tyr Ile Asp Tyr Leu Arg Asn Leu Pro  
 625 630 635 640  
 Ile Thr Ala His Pro Glu Val Phe Gly Leu His Glu Asn Ala Asp Ile  
 645 650 655  
 Thr Lys Asp Asn Gln Glu Thr Asn Gln Leu Phe Glu Gly Val Leu Leu  
 660 665 670  
 Thr Leu Pro Arg Gln Ser Gly Gly Ser Gly Lys Ser Pro Gln Glu Val  
 675 680 685  
 Val Glu Glu Leu Ala Gln Asp Ile Leu Ser Lys Leu Pro Arg Asp Phe  
 690 695 700  
 Asp Leu Glu Glu Val Met Lys Leu Tyr Pro Val Val Tyr Glu Glu Ser  
 705 710 715 720  
 Met Asn Thr Val Leu Arg Gln Glu Leu Ile Arg Phe Asn Arg Leu Thr  
 725 730 735  
 Lys Val Val Arg Arg Ser Leu Ile Asn Leu Gly Arg Ala Ile Lys Gly  
 740 745 750  
 Gln Val Leu Met Ser Ser Glu Leu Glu Glu Val Phe Asn Ser Met Leu  
 755 760 765  
 Val Gly Lys Val Pro Ala Met Trp Ala Ala Lys Ser Tyr Pro Ser Leu  
 770 775 780  
 Lys Pro Leu Gly Gly Tyr Val Ala Asp Leu Leu Ala Arg Leu Thr Phe  
 785 790 795 800  
 Phe Gln Glu Trp Ile Asp Lys Gly Pro Pro Val Val Phe Trp Ile Ser  
 805 810 815  
 Gly Phe Tyr Phe Thr Gln Ser Phe Leu Thr Gly Val Ser Gln Asn Tyr  
 820 825 830  
 Ala Arg Lys Tyr Thr Ile Pro Ile Asp His Ile Gly Phe Glu Phe Glu  
 835 840 845  
 Val Thr Pro Gln Glu Thr Val Met Glu Asn Asn Pro Glu Asp Gly Ala  
 850 855 860  
 Tyr Ile Lys Gly Leu Phe Leu Glu Gly Ala Arg Trp Asp Arg Lys Thr  
 865 870 875 880  
 Met Gln Ile Gly Glu Ser Leu Pro Lys Ile Leu Tyr Asp Pro Leu Pro  
 885 890 895  
 Ile Ile Trp Leu Lys Pro Gly Glu Ser Ala Met Phe Leu His Gln Asp  
 900 905 910  
 Ile Tyr Val Cys Pro Val Tyr Lys Thr Ser Ala Arg Arg Gly Thr Leu  
 915 920 925  
 Ser Thr Thr Gly His Ser Thr Asn Tyr Val Leu Ser Ile Glu Leu Pro  
 930 935 940  
 Thr Asp Met Pro Gln Lys His Trp Ile Asn Arg Gly Val Ala Ser Leu  
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 Cys Gln Leu Asp Asn  
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&lt;210&gt; 4651

&lt;211&gt; 869

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4651

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120
gccggcgcca gtctggtcct gagcctgctg cagagggtgg cgagctacgc gcggaaatgg
180
cagcagatgc ggcccatccc cacggtggcc cgcgcctacc cactggtggg ccacgcgctg
240
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300
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360
gcagaaaatg tggaggtaat tttaactagt tcaaagcaaa ttgacaaatc ctctatgtac
420
aagtttttag aaccatggct tggcctagga cttcttacia gtactggaaa caaatggcgc
480
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540
atcatgaatg aacaagcaaa tatattggtt aagaaacttg aaaaacacat taaccaagaa
600
gcatttaact gcttttttta catcactctt tgtgccttag atatcatctg tgaaacagct
660
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720
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780
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840
acccacagtg tcattcccga acgggcca
869

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&lt;210&gt; 4652

&lt;211&gt; 289

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4652

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Xaa Ala Arg Thr Phe Pro Glu Cys Thr Pro Arg Pro Pro Ala Gly Ala
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Met Ala Gly Leu Trp Leu Gly Leu Val Trp Gln Lys Leu Leu Leu Trp
20           25           30
Gly Ala Ala Ser Ala Val Ser Leu Ala Gly Ala Ser Leu Val Leu Ser
35           40           45
Leu Leu Gln Arg Val Ala Ser Tyr Ala Arg Lys Trp Gln Gln Met Arg
50           55           60
Pro Ile Pro Thr Val Ala Arg Ala Tyr Pro Leu Val Gly His Ala Leu
65           70           75           80
Leu Met Lys Pro Asp Gly Arg Glu Phe Phe Gln Gln Ile Ile Glu Tyr
85           90           95
Thr Glu Glu Tyr Arg His Met Pro Leu Leu Lys Leu Trp Val Gly Pro

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[illegible]

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<210> 4653
<211> 1276
<212> DNA
<213> Homo sapiens
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<400> 4653
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120
gtttgaacct ctaacaaaaa ggaacgaaga tgccgaggag cctgcctacg gagacacggc
180
cagtaacgga gatccccaga tccacgtggg actcctgcgc gacagtggca gcgagtgtct
240
cctcgtgcac gtgctgcagc tgaagaacct ggcggggctg gcggtgaagg aagactgcaa
300
agtccacatc cgagtctatt tgccccact tcgggtggata gcggctgtag caactgcacc
360
cagaccagcc ctccgtacct agagccctgt tgcattggga tcgactccat cctgggccac
420
ccatttgtg ctcaggcagg gccttacagc cccgagaaat ttcagccctc gcctcttaag
480
gttgataaag aaaccaaacac ggaagatctc tttctggaag aagcagccag cctcgtgaag
540
gagcggccca gccgccgggc ccgagggctg cttttgttc ggagtggcac gattgtccgt
600
tcccagacat tctcgccctg agcacgaagc cagtatgttt gcagacttta tcgtagtga
660

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 780  
 ctggacttgg agctggatct ccaggcgtcg agaacacggc agaggcagct gaatgaggag  
 840  
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 960  
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 1020  
 aagaaggcct ccaaggagat ctaccagctg cgtgggcaga gccacaaaga gcccaccaa  
 1080  
 gtgcagacct ttagggagaa gatagcattc ttcacaaggc caaggatcaa catacctcct  
 1140  
 ctcccagccg acgacgtctg atggagtgc tttgtgcat gaagtattta tccacctgtt  
 1200  
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 1276

&lt;210&gt; 4654

&lt;211&gt; 255

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4654

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 1 5 10 15  
 Pro Tyr Ser Pro Glu Lys Phe Gln Pro Ser Pro Leu Lys Val Asp Lys  
 20 25 30  
 Glu Thr Asn Thr Glu Asp Leu Phe Leu Glu Glu Ala Ala Ser Leu Val  
 35 40 45  
 Lys Glu Arg Pro Ser Arg Arg Ala Arg Gly Ser Pro Phe Val Arg Ser  
 50 55 60  
 Gly Thr Ile Val Arg Ser Gln Thr Phe Ser Pro Gly Ala Arg Ser Gln  
 65 70 75 80  
 Tyr Val Cys Arg Leu Tyr Arg Ser Asp Ser Asp Ser Ser Thr Leu Pro  
 85 90 95  
 Arg Lys Ser Pro Phe Val Arg Asn Thr Leu Glu Arg Arg Thr Leu Arg  
 100 105 110  
 Tyr Lys Gln Ser Cys Arg Ser Ser Leu Ala Glu Leu Met Ala Arg Thr  
 115 120 125  
 Ser Leu Asp Leu Glu Leu Asp Leu Gln Ala Ser Arg Thr Arg Gln Arg  
 130 135 140  
 Gln Leu Asn Glu Glu Leu Cys Ala Leu Arg Glu Leu Arg Gln Arg Leu  
 145 150 155 160  
 Glu Asp Ala Gln Leu Arg Gly Gln Thr Asp Leu Pro Pro Trp Val Leu  
 165 170 175  
 Arg Asp Glu Arg Leu Arg Gly Leu Leu Arg Glu Ala Glu Arg Gln Thr  
 180 185 190  
 Arg Gln Thr Lys Leu Asp Tyr Arg His Glu Gln Ala Ala Glu Lys Met

195	200	205
Leu Lys Lys Ala Ser Lys Glu Ile Tyr Gln Leu Arg Gly Gln Ser His		
210	215	220
Lys Glu Pro Ile Gln Val Gln Thr Phe Arg Glu Lys Ile Ala Phe Phe		
225	230	235
Thr Arg Pro Arg Ile Asn Ile Pro Pro Leu Pro Ala Asp Asp Val		240
245	250	255

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 <211> 456  
 <212> DNA  
 <213> Homo sapiens

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 120  
 cgccacgggg tccgccgcgc cgcgccgcgc cgcctttag tagtgaaga tgaagtagag  
 180  
 cttgatctcc agcacgaaga tgtaaaggaa ccacaggatc atggcgtagc cgcgcttggc  
 240  
 cgtgcgcacc tcggcgccca cccacacggc cacgtagcgc agcaccagca ggaagcacac  
 300  
 gtcgcccacc agcacgatga tgcacacgcc gatcttgccg gggccctggg tctgctccac  
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<210> 4656  
 <211> 152  
 <212> PRT  
 <213> Homo sapiens

<400> 4656  
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 1 5 10 15  
 Ala Val Gln Arg His Glu Gln Gln Glu Gln Ala Gly His Thr His Arg  
 20 25 30  
 Gln Gln Gln Arg Gln Arg Leu Ala Arg His Gly Val Arg Arg Ala Ala  
 35 40 45  
 Pro Arg Arg Leu Val Val Leu Glu Asp Glu Val Glu Leu Asp Leu Gln  
 50 55 60  
 His Glu Asp Val Lys Glu Pro Gln Asp His Gly Val Ala Ala Leu Gly  
 65 70 75 80  
 Arg Ala His Leu Gly Ala His Pro His Gly His Val Ala Gln His Gln  
 85 90 95  
 Gln Glu Ala His Val Ala His Gln His Asp Asp Ala His Ala Asp Leu  
 100 105 110  
 Ala Arg Ala Leu Val Leu Leu His Gln Val Arg Val His Asp Gly His  
 115 120 125  
 Ala Ala His Asp His Gln Arg Gly Gln Ala His Val Ala Pro Val Arg

130 135 140  
 Gly Arg Gln His His Gly Arg Pro  
 145 150

<210> 4657  
 <211> 723  
 <212> DNA  
 <213> Homo sapiens

<400> 4657  
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 aaccagctgc accgcaagtc tgtcaagaag gggtttgact tcacgctaata ggtggcaggg  
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 gagtcaggcc tagggaaatc caccctcatc aacagcctct tcctcaccaa cctctatgag  
 180  
 gatcgccagg tgccagaggc cagtgtctgc ttgacacaga ccctggccat tgagcgccgg  
 240  
 ggcgtagaga ttgaggaagg ggggtgtgaaa gtgaagctga cccttggtga cacacctggc  
 300  
 tttggggact cagtggactg ctctgactgc tggcttcagg tgggtgaaatt catcgaggag  
 360  
 caatttgagc agtaccttag ggatgagagt ggcctgaacc ggaagaacat ccaggactcc  
 420  
 cgagtcact gctgcctcta cttcatctca cccttcggcc gggctccggc ccctagatgt  
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 gccctgatgc cccaggaaac ccaggccctc aagcagaaga tccgggatca gttgaaggaa  
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 723

<210> 4658  
 <211> 233  
 <212> PRT  
 <213> Homo sapiens

<400> 4658  
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 Arg Lys Ser Val Lys Lys Gly Phe Asp Phe Thr Leu Met Val Ala Gly  
 20 25 30  
 Glu Ser Gly Leu Gly Lys Ser Thr Leu Ile Asn Ser Leu Phe Leu Thr  
 35 40 45  
 Asn Leu Tyr Glu Asp Arg Gln Val Pro Glu Ala Ser Ala Arg Leu Thr  
 50 55 60  
 Gln Thr Leu Ala Ile Glu Arg Arg Gly Val Glu Ile Glu Glu Gly Gly  
 65 70 75 80  
 Val Lys Val Lys Leu Thr Leu Val Asp Thr Pro Gly Phe Gly Asp Ser

								85				90				95			
Val	Asp	Cys	Ser	Asp	Cys	Trp	Leu	Pro	Val	Val	Lys	Phe	Ile	Glu	Glu				
								100				105				110			
Gln	Phe	Glu	Gln	Tyr	Leu	Arg	Asp	Glu	Ser	Gly	Leu	Asn	Arg	Lys	Asn				
								115				120				125			
Ile	Gln	Asp	Ser	Arg	Val	His	Cys	Cys	Leu	Tyr	Phe	Ile	Ser	Pro	Phe				
								130				135				140			
Gly	Arg	Ala	Pro	Ala	Pro	Arg	Cys	Gly	Phe	Leu	Arg	Ala	Ile	His	Glu				
								145				150				155			
Lys	Val	Asn	Ile	Ile	Pro	Val	Ile	Gly	Lys	Ala	Asp	Ala	Leu	Met	Pro				
								165				170				175			
Gln	Glu	Thr	Gln	Ala	Leu	Lys	Gln	Lys	Ile	Arg	Asp	Gln	Leu	Lys	Glu				
								180				185				190			
Glu	Glu	Ile	His	Ile	Tyr	Gln	Phe	Pro	Glu	Cys	Asp	Ser	Asp	Glu	Asp				
								195				200				205			
Glu	Asp	Phe	Lys	Arg	Gln	Asp	Ala	Glu	Met	Lys	Glu	Ser	Ile	Pro	Phe				
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Ala	Val	Val	Gly	Ser	Cys	Glu	Val	Val											
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<210> 4659
<211> 864
<212> DNA
<213> Homo sapiens
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120
ggcgccgggtg gtcgttgtga cccaacctgg agtcgggtccc ggtccggccc ccgagaactc
180
caactggcag acaggcatgt gtgactgttt cagcgactgc ggagtctgtc tctgtggcac
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420
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480
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540
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600
tttattataa atgaatgttg tccctgaact tagctaaatg gtgcaactta gtttctcctt
660
gctttcatat tatcgaattc gaatttctct gcttataaac tttttaaatt acatttgaaa
720
tataaaccaa atgaaatatt ttactgataa gattcttcat gcttctttgc tctccttaaa
780
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840

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<210> 4660  
<211> 192  
<212> PRT  
<213> Homo sapiens

<400> 4660  
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Ser Val Arg Ala Phe His His Gln Phe Leu Glu Ser Thr His Gly Ser  
35 40 45  
Pro Ser Val Asp Ile Ser Leu Asp Leu Ala Lys Ser Thr Met Arg Thr  
50 55 60  
Ala Lys Ser Cys His Ile Val Ile Thr Asn Arg Ser Arg Asp Ala Ile  
65 70 75 80  
Ser Gly Pro Val Glu Ser Pro His Cys Asp Ala Cys Ser Thr Gln Thr  
85 90 95  
Ala Phe Ile His Ile Ser Cys Asn Leu Thr Pro Lys Ala Arg Glu Thr  
100 105 110  
Lys Cys Ala Thr Glu Thr Asp Ser Ala Val Ala Glu Thr Val Thr His  
115 120 125  
Ala Cys Leu Pro Val Gly Val Leu Gly Gly Arg Thr Gly Thr Asp Ser  
130 135 140  
Arg Leu Gly His Asn Asp His Arg Arg Leu Ser Leu His Phe Gln Cys  
145 150 155 160  
Arg Ala Phe His Val Val Phe Ile Cys Gly Glu Ile Leu Ser Gln Ala  
165 170 175  
Thr Arg His Phe Leu Leu Gly Thr Leu Phe Thr Asn Phe His Cys Phe  
180 185 190

<210> 4661  
<211> 153  
<212> DNA  
<213> Homo sapiens

<400> 4661  
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tttgaggacc ctcaccatgg ccatgggcag ttc  
153

<210> 4662  
<211> 51  
<212> PRT  
<213> Homo sapiens

<400> 4662  
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Val Glu Val Val Gln Asn Glu Pro Phe Glu Asp Pro His His Gly His			
	35	40	45
Gly Gln Phe			
50			

&lt;210&gt; 4663

&lt;211&gt; 1550

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4663

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120
cagacggatg acccaggccc cctcgatggc cctgacctcc aggccagcca ctgagagctc
180
caggtgcccc cccctggcag agccggccta ctgaacacct ctggtaccaa aggcttagaa
240
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300
aagagattca gcagcgaacg gaagctcctg gaggtcagag gccctttcat catcaggcag
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420
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480
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600
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720
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780
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960
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1140
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1200

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 1440  
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<210> 4664

<211> 347

<212> PRT

<213> Homo sapiens

<400> 4664

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Ser	Asp	Glu	Ser	Asp	Glu	Val	Ile	Leu	Lys	Asp	Leu	Glu	Val	Leu	Ala
		20						25					30		
Glu	Ile	Ala	Ser	Ser	Pro	Ala	Gly	Gln	Thr	Asp	Asp	Pro	Gly	Pro	Leu
	35						40					45			
Asp	Gly	Pro	Asp	Leu	Gln	Ala	Ser	His	Ser	Glu	Leu	Gln	Val	Pro	Thr
	50					55				60					
Pro	Gly	Arg	Ala	Gly	Leu	Leu	Asn	Thr	Ser	Gly	Thr	Lys	Gly	Leu	Glu
65					70					75				80	
Cys	Ser	Pro	Ser	Thr	Pro	Thr	Met	Asn	Ser	Tyr	Phe	Tyr	Lys	Phe	Met
			85						90					95	
Ile	Asn	Leu	Leu	Lys	Arg	Phe	Ser	Ser	Glu	Arg	Lys	Leu	Leu	Glu	Val
		100						105						110	
Arg	Gly	Pro	Phe	Ile	Ile	Arg	Gln	Leu	Cys	Leu	Leu	Leu	Asn	Ala	Glu
	115						120						125		
Asn	Ile	Phe	His	Ser	Met	Ala	Asp	Ile	Leu	Leu	Arg	Glu	Glu	Asp	Leu
	130					135					140				
Lys	Phe	Ala	Ser	Thr	Met	Val	His	Ala	Leu	Asn	Thr	Ile	Leu	Leu	Thr
145					150					155				160	
Ser	Thr	Glu	Leu	Phe	Gln	Leu	Arg	Asn	Gln	Leu	Lys	Asp	Leu	Lys	Thr
			165						170					175	
Leu	Glu	Ser	Gln	Asn	Leu	Phe	Cys	Cys	Leu	Tyr	Arg	Ser	Trp	Cys	His
		180					185						190		
Asn	Pro	Val	Thr	Thr	Val	Ser	Leu	Cys	Phe	Leu	Thr	Gln	Asn	Tyr	Arg
		195					200						205		
His	Ala	Tyr	Asp	Leu	Ile	Gln	Lys	Phe	Gly	Asp	Leu	Glu	Val	Thr	Val
	210					215					220				
Asp	Phe	Leu	Ala	Glu	Val	Asp	Lys	Leu	Val	Gln	Leu	Ile	Glu	Cys	Pro
225					230					235				240	
Ile	Phe	Thr	Tyr	Leu	Arg	Leu	Gln	Leu	Leu	Asp	Val	Lys	Asn	Asn	Pro
			245						250					255	
Tyr	Leu	Ile	Lys	Ala	Leu	Tyr	Gly	Leu	Leu	Met	Leu	Leu	Pro	Gln	Ser
		260					265						270		
Ser	Ala	Phe	Gln	Leu	Leu	Ser	His	Arg	Leu	Gln	Cys	Val	Pro	Asn	Pro



	275		280		285										
Glu	Leu	Leu	Gln	Thr	Glu	Asp	Ser	Leu	Lys	Ala	Ala	Pro	Lys	Ser	Gln
	290					295						300			
Lys	Ala	Asp	Ser	Pro	Ser	Ile	Asp	Tyr	Ala	Glu	Leu	Leu	Gln	His	Phe
305					310					315					320
Glu	Lys	Val	Gln	Asn	Lys	His	Leu	Glu	Val	Arg	His	Gln	Arg	Ser	Gly
			325						330					335	
Arg	Gly	Asp	His	Leu	Asp	Arg	Arg	Val	Val	Leu					
			340						345						

&lt;210&gt; 4665

&lt;211&gt; 1043

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4665

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nttcggcacg aggggtggatc tcatcgaaag gcggcgcgat ctgtgtcggg cattaccaga
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agagtcttca tgtggacagt ctcagggaca ccatgtagag aattttggtc tcgattcaga
120
aaagagaaag agccagtggg tgttgagaca gtagaagaga aaaaggaacc taccctagtg
180
tgtccacctt tacgaagccg agcatacaca ccacctgaag atctccagag tcgtttggaa
240
tcttacgtta aagaagtttt tggttcatct ctccctagta attggcaaga catctccctg
300
gaagatagtc gtctaaagtt caatcttctg gctcatttag ctgatgactt gggtcattga
360
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420
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480
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540
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600
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660
tattacaaat ggacaaataa cggactttct attttcatat ttgctgaaac cattttttta
720
atgaaattag gtcattatth atgaaaagtt ttgagagggc actgtcaact tgggtttaag
780
acaggaggac attgcaagtt cacacctttc ataagcataa agtagttgca agaaagtatt
840
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1043

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&lt;210&gt; 4666

<211> 167  
 <212> PRT  
 <213> Homo sapiens

<400> 4666  
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 20 25 30  
 Arg Glu Phe Trp Ser Arg Phe Arg Lys Glu Lys Glu Pro Val Val Val  
 35 40 45  
 Glu Thr Val Glu Glu Lys Lys Glu Pro Ile Leu Val Cys Pro Pro Leu  
 50 55 60  
 Arg Ser Arg Ala Tyr Thr Pro Pro Glu Asp Leu Gln Ser Arg Leu Glu  
 65 70 75 80  
 Ser Tyr Val Lys Glu Val Phe Gly Ser Ser Leu Pro Ser Asn Trp Gln  
 85 90 95  
 Asp Ile Ser Leu Glu Asp Ser Arg Leu Lys Phe Asn Leu Leu Ala His  
 100 105 110  
 Leu Ala Asp Asp Leu Gly His Val Val Pro Asn Ser Arg Leu His Gln  
 115 120 125  
 Met Cys Arg Val Arg Asp Val Leu Asp Phe Tyr Asn Val Pro Ile Gln  
 130 135 140  
 Asp Arg Ser Lys Phe Asp Glu Leu Ser Ala Ser Asn Leu Pro Pro Asn  
 145 150 155 160  
 Leu Lys Ile Thr Trp Ser Tyr  
 165

<210> 4667  
 <211> 1031  
 <212> DNA  
 <213> Homo sapiens

<400> 4667  
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 180  
 tcagatgcca ccaacattga ggcttccatc agagaggagg acagcttcta tgtcataaac  
 240  
 ggtcacaaat ggtggatcac aggcacccctg gatcctcggt gccaaactctg tgtgtttatg  
 300  
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 360  
 gataccccag ggataaaaat catccggcct ctgacgggtg atggactgga agatgcacca  
 420  
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 480  
 ggccctggcc gaggttttga gatcgcccag ggcagactgg gccccggcag gatccatcac  
 540  
 tgcattgaggc tgatcgggtt ctgagagagg gccctggcac tcatgaaggc ccgctgaggt  
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gctttccccc gcaccagca ctgactcaga accaccacct tctgctttgc tgcggactt  
 660  
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 720  
 aagaagtgc attcctgtct gctttgcac tgctactttg ctgcagtttg gattcagagc  
 780  
 agaatggacc ccactctgtc gaggtgacct gaagggaac gccaggctct gtagcagcag  
 840  
 agggaaggt tccaaggtgt aaaggtcatg ctgctagcac attattaaaa atcagtctgg  
 900  
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 1020  
 aaaaaaaaaa a  
 1031

&lt;210&gt; 4668

&lt;211&gt; 207

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4668

Xaa	Ala	Met	Gly	Thr	Ser	Leu	Tyr	Ala	Pro	Glu	Val	Cys	Asn	Cys	Ser
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Ala	Pro	Asp	Thr	Gly	Asn	Met	Glu	Leu	Leu	Val	Arg	Tyr	Gly	Thr	Glu
			20					25					30		
Ala	Gln	Lys	Ala	Arg	Trp	Leu	Ile	Pro	Leu	Leu	Glu	Gly	Lys	Ala	Arg
		35				40						45			
Ser	Cys	Phe	Ala	Met	Thr	Glu	Pro	Gln	Val	Ala	Ser	Ser	Asp	Ala	Thr
	50					55					60				
Asn	Ile	Glu	Ala	Ser	Ile	Arg	Glu	Glu	Asp	Ser	Phe	Tyr	Val	Ile	Asn
65					70				75					80	
Gly	His	Lys	Trp	Trp	Ile	Thr	Gly	Ile	Leu	Asp	Pro	Arg	Cys	Gln	Leu
			85					90						95	
Cys	Val	Phe	Met	Gly	Lys	Thr	Asp	Pro	His	Ala	Pro	Arg	His	Arg	Gln
			100					105					110		
Gln	Ser	Val	Leu	Leu	Val	Pro	Met	Asp	Thr	Pro	Gly	Ile	Lys	Ile	Ile
		115				120						125			
Arg	Pro	Leu	Thr	Val	Tyr	Gly	Leu	Glu	Asp	Ala	Pro	Gly	Gly	His	Gly
	130					135						140			
Glu	Val	Arg	Phe	Glu	His	Val	Arg	Val	Pro	Lys	Glu	Asn	Met	Val	Leu
145					150					155				160	
Gly	Pro	Gly	Arg	Gly	Phe	Glu	Ile	Ala	Gln	Gly	Arg	Leu	Gly	Pro	Gly
			165					170						175	
Arg	Ile	His	His	Cys	Met	Arg	Leu	Ile	Gly	Phe	Ser	Glu	Arg	Ala	Leu
		180						185					190		
Ala	Leu	Met	Lys	Ala	Arg	Val	Ser	Ala	Phe	Pro	Arg	Thr	Gln	His	
		195					200						205		

&lt;210&gt; 4669

&lt;211&gt; 683

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

<400> 4669  
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 120  
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 180  
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 240  
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 300  
 tcttattaca gaggctttta agtacgaaag gatattcaaa atatgcaccg ggctgccaca  
 360  
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 420  
 gcaattgtgg ttatacagaa ttattatagg ttgtatgtta gagtaaaaac agaaagaaaa  
 480  
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 540  
 gttagacaaa aattgaaaaa atgtatcaga ggaaaagatg gcagccattg ttaaccaatc  
 600  
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 683

<210> 4670  
 <211> 135  
 <212> PRT  
 <213> Homo sapiens

<400> 4670  
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 20 25 30  
 Thr Cys Val Gln Ala Gly Phe Gln Asp Met Asn Ile Lys Lys Gln Ile  
 35 40 45  
 Gln Glu Gln His Gln Ala Ala Ile Ile Ile Gln Lys His Cys Lys Ala  
 50 55 60  
 Phe Lys Ile Arg Lys His Tyr Leu His Ile Arg Ala Thr Val Val Ser  
 65 70 75 80  
 Ile Gln Arg Arg Tyr Arg Lys Leu Thr Ala Val Arg Thr Gln Ala Val  
 85 90 95  
 Ile Cys Ile Gln Ser Tyr Tyr Arg Gly Phe Lys Val Arg Lys Asp Ile  
 100 105 110  
 Gln Asn Met His Arg Ala Ala Thr Leu Ile Gln Ser Phe Tyr Arg Met  
 115 120 125  
 His Arg Ala Lys Val Asp Tyr  
 130 135

<210> 4671  
 <211> 657

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4671

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120
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180
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240
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300
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360
gtcaacaacc tgggtggcct gtcattcctg gaactgggca tcatagccga cgctaccgtc
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480
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540
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600
aacgggtgtg cagcactctc ctgggcctgg aggaacacct gaatgccctg gaccggg
657

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&lt;210&gt; 4672

&lt;211&gt; 152

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4672

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Ala Arg Leu Leu Gln Trp Phe Gln His Leu Ser Ala Gly Ile His Gly
1           5           10           15
Glu Ala Gly Val Arg Arg Ile Lys Met Ala Thr Ala Asp Glu Ile Val
20          25          30
Lys Leu Met Leu Asp His Met Thr Asn Thr Thr Asn Ala Ser His Val
35          40          45
Pro Val Gln Pro Gly Ser Ser Val Val Met Met Val Asn Asn Leu Gly
50          55          60
Gly Leu Ser Phe Leu Glu Leu Gly Ile Ile Ala Asp Ala Thr Val Arg
65          70          75          80
Ser Leu Glu Gly Arg Gly Val Lys Ile Ala Arg Ala Leu Val Gly Thr
85          90          95
Phe Met Ser Ala Leu Glu Met Pro Gly Ile Ser Leu Thr Leu Leu Leu
100         105         110
Val Asp Glu Pro Leu Leu Lys Leu Ile Asp Ala Glu Thr Thr Ala Ala
115         120         125
Ala Trp Pro Arg Ser Gly Trp Arg Trp Cys Trp Asn Gly Cys Ala Ala
130         135         140
Leu Ser Trp Ala Trp Arg Asn Thr
145         150

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<210> 4673  
<211> 1335  
<212> DNA  
<213> Homo sapiens

<400> 4673  
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120  
aatctaagga tgaatgttca ccgtggcagt gacagtgaca ggttattgcg gcaggaggcc  
180  
agctgcttag tggatgatac tttagctgta gccaagaaa aagaagcaaa cagcctggct  
240  
tcattctggtc ctcataatct tacttatacct ctagggtccca ggaatgaaga cctctcactt  
300  
gactatgcct ctacagccagc aaatcttcag tccccacaca taatgccctt tgctgaagac  
360  
atcaaagggtt cttgcttcca aagtgggaat aaacggaacc atgaaccttt tattgctcca  
420  
gaaagatttg gaaacagtag tgtgggcttt ggcagtaatt cccattccca agcaccagag  
480  
aaagtgcgc ttcttgtaga tggcacacgt tttgtgtga atccacagat tttcactgct  
540  
catccggata ccatgctggg aaggatgttt ggaccaggaa gagagtacaa cttcactcgg  
600  
cccaatgaga agggagagta tgagattgct gaaggcatca gtgcaactgt atttcgcaca  
660  
gtgctggatt attacaaaac cggatcatc aattgtcctg atggcatctc tatcccagat  
720  
cttagagata cttgtgatta tctctgcatt aattttgact tcaacactat ccgatgtcaa  
780  
gatctgagtg ctttactcca tgaactgtct aatgacgggt ctcataagca gtttgatcac  
840  
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900  
tgccacattg ttgtgctgac ggatgaggat tctgtggact gggatgaaga ccaccctcca  
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ccaatggggg aggaatatc ccaaattctt tatagtctca agctctacag attcttcaaa  
1020  
tatattgaga atagggatgt tgcaaaaaca gtgttaaagg aacggggcct aaaaaacatt  
1080  
cgcattggaa ttgaaggta ccctacctgt aaagaaaaa ttaagagaag gcctggcggc  
1140  
cgttctgaag tcactataa ttatgtacaa cggcccttca tccagatgtc atgggaaaag  
1200  
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1335

<210> 4674

<211> 402  
 <212> PRT  
 <213> Homo sapiens

<400> 4674

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Ala Ser Cys Leu Val Asp Asp Thr Leu Ala Val Ala Gln Glu Lys Glu
 20              25              30
Ala Asn Ser Leu Ala Ser Ser Gly Pro His Asn Leu Thr Tyr Pro Leu
 35              40              45
Gly Pro Arg Asn Glu Asp Leu Ser Leu Asp Tyr Ala Ser Gln Pro Ala
 50              55              60
Asn Leu Gln Phe Pro His Ile Met Pro Leu Ala Glu Asp Ile Lys Gly
 65              70              75              80
Ser Cys Phe Gln Ser Gly Asn Lys Arg Asn His Glu Pro Phe Ile Ala
 85              90              95
Pro Glu Arg Phe Gly Asn Ser Ser Val Gly Phe Gly Ser Asn Ser His
100              105              110
Ser Gln Ala Pro Glu Lys Val Thr Leu Leu Val Asp Gly Thr Arg Phe
115              120              125
Val Val Asn Pro Gln Ile Phe Thr Ala His Pro Asp Thr Met Leu Gly
130              135              140
Arg Met Phe Gly Pro Gly Arg Glu Tyr Asn Phe Thr Arg Pro Asn Glu
145              150              155              160
Lys Gly Glu Tyr Glu Ile Ala Glu Gly Ile Ser Ala Thr Val Phe Arg
165              170              175
Thr Val Leu Asp Tyr Tyr Lys Thr Gly Ile Ile Asn Cys Pro Asp Gly
180              185              190
Ile Ser Ile Pro Asp Leu Arg Asp Thr Cys Asp Tyr Leu Cys Ile Asn
195              200              205
Phe Asp Phe Asn Thr Ile Arg Cys Gln Asp Leu Ser Ala Leu Leu His
210              215              220
Glu Leu Ser Asn Asp Gly Ala His Lys Gln Phe Asp His Tyr Leu Glu
225              230              235              240
Glu Leu Ile Leu Pro Ile Met Val Gly Cys Ala Lys Lys Gly Glu Arg
245              250              255
Glu Cys His Ile Val Val Leu Thr Asp Glu Asp Ser Val Asp Trp Asp
260              265              270
Glu Asp His Pro Pro Pro Met Gly Glu Glu Tyr Ser Gln Ile Leu Tyr
275              280              285
Ser Ser Lys Leu Tyr Arg Phe Phe Lys Tyr Ile Glu Asn Arg Asp Val
290              295              300
Ala Lys Thr Val Leu Lys Glu Arg Gly Leu Lys Asn Ile Arg Ile Gly
305              310              315              320
Ile Glu Gly Tyr Pro Thr Cys Lys Glu Lys Ile Lys Arg Arg Pro Gly
325              330              335
Gly Arg Ser Glu Val Ile Tyr Asn Tyr Val Gln Arg Pro Phe Ile Gln
340              345              350
Met Ser Trp Glu Lys Glu Glu Gly Lys Ser Arg His Val Asp Phe Gln
355              360              365
Cys Val Arg Ser Lys Ser Leu Thr Asn Leu Val Ala Ala Gly Asp Asp
370              375              380
Val Leu Glu Asp Gln Glu Ile Leu Met His His Pro Pro Gln Val Asp

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385  
Glu Leu

390

395

400

<210> 4675  
<211> 2868  
<212> DNA  
<213> Homo sapiens

<400> 4675  
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180  
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240  
tgccctggaa gtgatgaagg cttcaccaga aagaaatgca cgattggaat ggttggtgaa  
300  
ggaagcattc agtcctctcg atataagaag gaatcaaagt caggccttgt gaaaccaggt  
360  
agtgaagctg attttagctc ctcgagcagc acaggcagca tttccgctcc tgaggtccat  
420  
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480  
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720  
ccagagcagt atttgactcc actgcagcag aaagagggtga cagtgaagaca cctcaaaacc  
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840  
tcccagctgg cccgcctgag agaggactgg attgaggagg agtgtcaccg ggtagaggcc  
900  
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&lt;211&gt; 641

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4676

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&lt;210&gt; 4677

&lt;211&gt; 940

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4677

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<213> Homo sapiens

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&lt;213&gt; Homo sapiens

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2280  
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2400  
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2460  
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 3240  
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 3246

<210> 4684  
 <211> 385  
 <212> PRT  
 <213> Homo sapiens

<400> 4684  
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 Arg Pro Leu Asn Ala Ala Ala Ala Ala Thr Pro Val Tyr Pro Ala  
 20 25 30  
 Pro His Ala Arg Ser Arg Val Arg Pro Ala Pro Lys Thr Ile Pro Gln  
 35 40 45  
 Gln Thr His Gly Thr Ala Arg Ile Gly Thr His Asn Gly Thr Phe His  
 50 55 60  
 Cys Asp Glu Ala Leu Ala Cys Ala Leu Leu Arg Leu Leu Pro Glu Tyr  
 65 70 75 80  
 Arg Asp Ala Glu Ile Val Arg Thr Arg Asp Pro Glu Lys Leu Ala Ser  
 85 90 95  
 Cys Asp Ile Val Val Asp Val Gly Gly Glu Tyr Asp Pro Arg Arg His  
 100 105 110  
 Arg Tyr Asp His His Gln Arg Ser Phe Thr Glu Thr Met Ser Ser Leu  
 115 120 125  
 Ser Pro Gly Lys Pro Trp Gln Thr Lys Leu Ser Ser Ala Gly Leu Ile  
 130 135 140  
 Tyr Leu His Phe Gly His Lys Leu Leu Ala Gln Leu Leu Gly Thr Ser  
 145 150 155 160  
 Glu Glu Asp Ser Met Val Gly Thr Leu Tyr Asp Lys Met Tyr Glu Asn  
 165 170 175  
 Phe Val Glu Glu Val Asp Ala Val Asp Asn Gly Ile Ser Gln Trp Ala  
 180 185 190  
 Glu Gly Glu Pro Arg Tyr Ala Leu Thr Thr Thr Leu Ser Ala Arg Val  
 195 200 205  
 Ala Arg Leu Asn Pro Thr Trp Asn His Pro Asp Gln Asp Thr Glu Ala  
 210 215 220  
 Gly Phe Lys Arg Ala Met Asp Leu Val Gln Glu Glu Phe Leu Gln Arg  
 225 230 235 240  
 Leu Asp Phe Tyr Gln His Ser Trp Leu Pro Ala Arg Ala Leu Val Glu  
 245 250 255  
 Glu Ala Leu Ala Gln Arg Phe Gln Val Asp Pro Ser Gly Glu Ile Val  
 260 265 270  
 Glu Leu Ala Lys Gly Ala Cys Pro Trp Lys Glu His Leu Tyr His Leu  
 275 280 285  
 Glu Ser Gly Leu Ser Pro Pro Val Ala Ile Phe Phe Val Ile Tyr Thr  
 290 295 300  
 Asp Gln Ala Gly Gln Trp Arg Ile Gln Cys Val Pro Lys Glu Pro His

```

305          310          315          320
Ser Phe Gln Ser Arg Leu Pro Leu Pro Glu Pro Trp Arg Gly Leu Arg
          325          330          335
Asp Glu Ala Leu Asp Gln Val Ser Gly Ile Pro Gly Cys Ile Phe Val
          340          345          350
His Ala Ser Gly Phe Ile Gly Gly His Arg Thr Arg Glu Gly Ala Leu
          355          360          365
Ser Met Ala Arg Ala Thr Leu Ala Gln Arg Ser Tyr Leu Pro Gln Ile
          370          375          380
Ser
385

```

```

<210> 4685
<211> 618
<212> DNA
<213> Homo sapiens

```

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<400> 4685
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120
gtccctgtgt ctctcatcct gtgctggtgg caggggtgag ccaccaactc ggaaggccca
180
gggtgaagtg tgggctgctg aggactgagc gatcaccac atgtccacac agccagccgg
240
gccgcagctg atgcccagg acgcgctgga caccggtctg cagccgcttc caacctctcc
300
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360
gtccagaaga actatgaaca cttatttaag gtgaatgata aatccgtggg tggctccttc
420
tacctgcagt caaaggtggt ccgcgcaaag gagcgcttg atgaggaact caaaatccag
480
gcccaggagg acagagaaaa agggcagatg ccccatagct gactgctcgg cccccccgc
540
ccaccccgcc gcctctaatt tatagcttgg taataaattt cttttctgca aaaaaagag
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gctggagtgt gctcgcga
618

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```

<210> 4686
<211> 106
<212> PRT
<213> Homo sapiens

```

```

<400> 4686
Gly Leu Ser Asp His Pro His Val His Thr Ala Ser Arg Ala Ala Ala
1      5      10      15
Asp Ala Arg Gly Arg Ala Gly His Arg Ser Ala Ala Ala Ser Asn Leu
20     25     30
Ser Gly Leu Ser Leu Gln Glu Ala Gln Gln Ile Leu Asn Val Ser Lys
35     40     45
Leu Ser Pro Glu Glu Val Gln Lys Asn Tyr Glu His Leu Phe Lys Val

```

```

      50              55              60
Asn Asp Lys Ser Val Gly Gly Ser Phe Tyr Leu Gln Ser Lys Val Val
65              70              75              80
Arg Ala Lys Glu Arg Leu Asp Glu Glu Leu Lys Ile Gln Ala Gln Glu
      85              90              95
Asp Arg Glu Lys Gly Gln Met Pro His Thr
      100              105

```

&lt;210&gt; 4687

&lt;211&gt; 309

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4687

```

acgcgtcggg gctgagccgg ggtccagcag ccgccgctat ggacatcccc ccgctggccg
60
gcaagatcgc ggcgctgtcg ctgagcgccc tcccggtgtc ctacgcgctc aaccacgtct
120
cggcgctctc gcacccctg tgggtggcat tgatgagcgc cctaattcctg ggtctgcttt
180
tcgtggcggt ctacagcttg tcccatggcg aggtctccta tgaccactc tatgtgggt
240
tcgtgtctct cgccttcacc tcgggtgggg acctcatcat cgctcttcag gaagacagct
300
atgggggggg
309

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&lt;210&gt; 4688

&lt;211&gt; 90

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4688

```

Met Asp Ile Pro Pro Leu Ala Gly Lys Ile Ala Ala Leu Ser Leu Ser
1              5              10              15
Ala Leu Pro Val Ser Tyr Ala Leu Asn His Val Ser Ala Leu Ser His
      20              25              30
Pro Leu Trp Val Ala Leu Met Ser Ala Leu Ile Leu Gly Leu Leu Phe
      35              40              45
Val Ala Val Tyr Ser Leu Ser His Gly Glu Val Ser Tyr Asp Pro Leu
      50              55              60
Tyr Ala Gly Phe Ala Val Phe Ala Phe Thr Ser Gly Gly Asp Leu Ile
65              70              75              80
Ile Ala Leu Gln Glu Asp Ser Tyr Gly Gly
      85              90

```

&lt;210&gt; 4689

&lt;211&gt; 898

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4689

```

ncgccccgtc cctcgcgccg aatcgctccc ctggacggcg ctcggctggc cctgagcttg
60

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cgctggcgct ggcggacgcc ggactgtcca ccagcatcag ccccgagga cctgatgttc  
 120  
 ctgctggaca gctcagccag cgtctctcac tacgagttct cccgggttcg ggagtttg  
 180  
 gggcagctgg tggctccact gccctggca ccgnnggcc tgcgtgccag tctggtgcac  
 240  
 gtgggcagtc ggccatacac cgagttcccc ttcggccagc acagctcggg tgaggctgcc  
 300  
 caggatgcgg tgcgtgcttc tgcccagcgc atgggtgaca cccacactgg cctggcgctg  
 360  
 gtctatgcca aggaacagct gtttgctgaa gcatcaggtg cccggccagg ggtgccccaa  
 420  
 gtgctggtgt ggggtgacaga tggcggctcc agcgacctg tgggcccccc catgcaggag  
 480  
 ctcaaggacc tgggcgtcac cgtgttcatt gtcagcaccg gccgaggcaa cttcctggag  
 540  
 ctgtcagccg ctgcctcagc ccctgccgag aagcacctgc actttgtgga cgtggatgac  
 600  
 ctgcacatca ttgtccaaga gctgaggggc tccattctcg acgcatgagc gccacagcag  
 660  
 ctccatgcca cggagatcac gtccagcggc ttccgcctgg cctggccacc cctgctgacc  
 720  
 gcagactcgg gctactatgt gctggagctg gtgcccagcg cccagccggg ggctgcaaga  
 780  
 cgccagcagc tgccagggaa cgccacggac tggatctggg ccggcctcga cccggacacg  
 840  
 gactacgacg tggcgctagt gcctgagtcc aacgtgcgcc tcctgaggcc ccagatct  
 898

&lt;210&gt; 4690

&lt;211&gt; 299

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4690

Xaa	Pro	Arg	Pro	Ser	Arg	Arg	Ile	Ala	Pro	Leu	Asp	Gly	Ala	Arg	Leu
1				5					10					15	
Ala	Leu	Ser	Leu	Arg	Trp	Arg	Trp	Arg	Thr	Pro	Asp	Cys	Pro	Pro	Ala
			20					25					30		
Ser	Ala	Pro	Glu	Asp	Leu	Met	Phe	Leu	Leu	Asp	Ser	Ser	Ala	Ser	Val
		35					40				45				
Ser	His	Tyr	Glu	Phe	Ser	Arg	Val	Arg	Glu	Phe	Val	Gly	Gln	Leu	Val
	50				55					60					
Ala	Pro	Leu	Pro	Leu	Ala	Pro	Xaa	Ala	Leu	Arg	Ala	Ser	Leu	Val	His
65					70				75					80	
Val	Gly	Ser	Arg	Pro	Tyr	Thr	Glu	Phe	Pro	Phe	Gly	Gln	His	Ser	Ser
			85					90					95		
Gly	Glu	Ala	Ala	Gln	Asp	Ala	Val	Arg	Ala	Ser	Ala	Gln	Arg	Met	Gly
		100					105					110			
Asp	Thr	His	Thr	Gly	Leu	Ala	Leu	Val	Tyr	Ala	Lys	Glu	Gln	Leu	Phe
		115				120						125			
Ala	Glu	Ala	Ser	Gly	Ala	Arg	Pro	Gly	Val	Pro	Lys	Val	Leu	Val	Trp
	130					135					140				
Val	Thr	Asp	Gly	Gly	Ser	Ser	Asp	Pro	Val	Gly	Pro	Pro	Met	Gln	Glu

```

145          150          155          160
Leu Lys Asp Leu Gly Val Thr Val Phe Ile Val Ser Thr Gly Arg Gly
          165          170          175
Asn Phe Leu Glu Leu Ser Ala Ala Ala Ser Ala Pro Ala Glu Lys His
          180          185          190
Leu His Phe Val Asp Val Asp Asp Leu His Ile Ile Val Gln Glu Leu
          195          200          205
Arg Gly Ser Ile Leu Asp Ala Met Arg Pro Gln Gln Leu His Ala Thr
          210          215          220
Glu Ile Thr Ser Ser Gly Phe Arg Leu Ala Trp Pro Pro Leu Leu Thr
          225          230          235          240
Ala Asp Ser Gly Tyr Tyr Val Leu Glu Leu Val Pro Ser Ala Gln Pro
          245          250          255
Gly Ala Ala Arg Arg Gln Gln Leu Pro Gly Asn Ala Thr Asp Trp Ile
          260          265          270
Trp Ala Gly Leu Asp Pro Asp Thr Asp Tyr Asp Val Ala Leu Val Pro
          275          280          285
Glu Ser Asn Val Arg Leu Leu Arg Pro Gln Ile
          290          295

```

<210> 4691  
<211> 2375  
<212> DNA  
<213> Homo sapiens

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<400> 4691
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120
ccaaatgctc ctatctggct cataactcaat gaagctggac tatactggag agcagtagga
180
aatagcactt ttgctattgc ctgtcttcag agggctttga atttagctcc acttcaatac
240
caagatgttc ctcttgtaaa cttggccaac cttttgatcc attacggcct tcatcttgat
300
gccactaagc tgctacttca agcttttgcc atcaatagct ctgagcctct gacctttttg
360
agcctgggaa atgcttacct tgctctgaag aatatcagtg gggcacttga ggcctttaga
420
caggccttga aattaaccac caaatgtcca gagtgtgaaa acagcctgaa gttgatccgc
480
tgtatgcagt tttatccttt tctgtacaac atcacttctt ctgtttgcag tggttaattgt
540
catgagaaaa ccctggacaa cagccatgac aaacagaaat attttgacaa ctcacagtca
600
ctggatgctg ctgaagaaga gccctctgag agaggaacag aggaggaccc tgtattctct
660
gttgagaatt cagggaggga ctcagatgcc cttagacttg aaagtacggt ggttgaggag
720
agcaatgggt ctgatgagat ggagaattca gatgaaacca aaatgtcaga agaaatactg
780
gctttgggtg atgaatttca acaggcatgg cctttggaag gctttggggg tgcactagag
840

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atgaaagggc ggcgtctaga cttacaagga atacgggtgc tgaagaaagg tccccaggat  
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ggagtggcca gaagctcttg ctatggagac tgcagaagtg aagatgatga agcaacagaa  
960  
tggattacat tccagggtcaa acgtgtaaag aaacccaaag gagatcataa gaaaactcct  
1020  
gggaaaaaag tagaaacagg tcagatagaa aatggacatc gttaccaagc aaacctagag  
1080  
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1140  
aaagtgccat agacataatg taactggatt tcagcaaggc atttaacaga gcctcttatg  
1200  
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1320  
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1380  
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1440  
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2100  
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2280  
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2340  
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2375

&lt;210&gt; 4692

&lt;211&gt; 383

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4692

```

Xaa Asp Leu Lys Ala Lys Met Pro Asp Asp His Ala Arg Lys Ile Leu
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Leu Ser Arg Ile Asn Asn Tyr Thr Ile Pro Glu Glu Glu Ile Gly Ser
 20           25           30
Phe Leu Phe His Ala Ile Asn Lys Pro Asn Ala Pro Ile Trp Leu Ile
 35           40           45
Leu Asn Glu Ala Gly Leu Tyr Trp Arg Ala Val Gly Asn Ser Thr Phe
 50           55           60
Ala Ile Ala Cys Leu Gln Arg Ala Leu Asn Leu Ala Pro Leu Gln Tyr
 65           70           75           80
Gln Asp Val Pro Leu Val Asn Leu Ala Asn Leu Leu Ile His Tyr Gly
 85           90           95
Leu His Leu Asp Ala Thr Lys Leu Leu Leu Gln Ala Leu Ala Ile Asn
100          105          110
Ser Ser Glu Pro Leu Thr Phe Leu Ser Leu Gly Asn Ala Tyr Leu Ala
115          120          125
Leu Lys Asn Ile Ser Gly Ala Leu Glu Ala Phe Arg Gln Ala Leu Lys
130          135          140
Leu Thr Thr Lys Cys Pro Glu Cys Glu Asn Ser Leu Lys Leu Ile Arg
145          150          155          160
Cys Met Gln Phe Tyr Pro Phe Leu Tyr Asn Ile Thr Ser Ser Val Cys
165          170          175
Ser Gly Asn Cys His Glu Lys Thr Leu Asp Asn Ser His Asp Lys Gln
180          185          190
Lys Tyr Phe Asp Asn Ser Gln Ser Leu Asp Ala Ala Glu Glu Glu Pro
195          200          205
Ser Glu Arg Gly Thr Glu Glu Asp Pro Val Phe Ser Val Glu Asn Ser
210          215          220
Gly Arg Asp Ser Asp Ala Leu Arg Leu Glu Ser Thr Val Val Glu Glu
225          230          235          240
Ser Asn Gly Ser Asp Glu Met Glu Asn Ser Asp Glu Thr Lys Met Ser
245          250          255
Glu Glu Ile Leu Ala Leu Val Asp Glu Phe Gln Gln Ala Trp Pro Leu
260          265          270
Glu Gly Phe Gly Gly Ala Leu Glu Met Lys Gly Arg Arg Leu Asp Leu
275          280          285
Gln Gly Ile Arg Val Leu Lys Lys Gly Pro Gln Asp Gly Val Ala Arg
290          295          300
Ser Ser Cys Tyr Gly Asp Cys Arg Ser Glu Asp Asp Glu Ala Thr Glu
305          310          315          320
Trp Ile Thr Phe Gln Val Lys Arg Val Lys Lys Pro Lys Gly Asp His
325          330          335
Lys Lys Thr Pro Gly Lys Lys Val Glu Thr Gly Gln Ile Glu Asn Gly
340          345          350
His Arg Tyr Gln Ala Asn Leu Glu Ile Thr Gly Pro Lys Val Ala Ser
355          360          365
Pro Gly Pro Gln Gly Leu Leu Asp Trp Lys Thr Arg Lys Val Pro
370          375          380

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<210> 4693  
 <211> 794  
 <212> DNA  
 <213> Homo sapiens

<400> 4693  
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 120  
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 180  
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 240  
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 300  
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 660  
 ctgtggagtt ggtagatgcc tctgatcctc agtattctct ctggcaatgt tccacggctt  
 720  
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 780  
 gcccttcac gcgt  
 794

<210> 4694  
 <211> 103  
 <212> PRT  
 <213> Homo sapiens

<400> 4694  
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 Leu Lys Asn Gln Leu Glu Ser Leu Gln Arg Arg Val Glu Asp Glu Val  
 20 25 30  
 Asn Ser Gly Val Gly Gln Asp Gly Ser Leu Leu Ser Ser Pro Phe Leu  
 35 40 45  
 Lys Gly Phe Leu Ala Gly Tyr Val Val Ala Lys Leu Arg Ala Ser Ala  
 50 55 60  
 Val Leu Gly Phe Ala Val Gly Thr Cys Thr Gly Ile Tyr Ala Ala Gln  
 65 70 75 80  
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 85 90 95  
 Leu Leu Arg Lys Gly Pro Asp

100

<210> 4695  
<211> 2209  
<212> DNA  
<213> Homo sapiens

<400> 4695  
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gaatacacc ttctttcaac ggctattcaa agatcacctg gctgcaaagc tttctttcct  
120  
cgctgtgct tcttccttaa ctatctctag ttaaagctat ctccaccacc aggccacaag  
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ctcccagaga acagagatcg tgtttttcat tattctgtcc atttccatcc cccactcccg  
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720  
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3883

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<210> 4696

<211> 302

<212> PRT

<213> Homo sapiens

<400> 4696

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			20					25					30		
Leu	Glu	Met	Pro	Gly	Ile	Ser	Leu	Thr	Leu	Leu	Leu	Val	Asp	Glu	Pro
		35					40					45			
Leu	Leu	Lys	Leu	Ile	Asp	Ala	Glu	Thr	Thr	Ala	Ala	Ala	Trp	Pro	Asn
	50				55					60					
Val	Ala	Ala	Val	Ser	Ile	Thr	Gly	Arg	Lys	Arg	Ser	Arg	Val	Ala	Pro
	65				70				75				80		
Ala	Glu	Pro	Gln	Glu	Ala	Pro	Asp	Ser	Thr	Ala	Ala	Xaa	Glu	Ala	Gln
			85					90				95			
Pro	Arg	Ser	Xaa	Met	Ala	Leu	Val	Leu	Glu	Arg	Val	Cys	Ser	Thr	Leu
		100						105				110			
Leu	Gly	Leu	Glu	Glu	His	Leu	Asn	Ala	Leu	Asp	Arg	Ala	Ala	Gly	Asp
		115					120					125			
Gly	Asp	Cys	Gly	Thr	Thr	His	Ser	Arg	Ala	Ala	Arg	Ala	Ile	Gln	Glu
	130					135					140				
Trp	Leu	Lys	Glu	Gly	Pro	Pro	Pro	Ala	Ser	Pro	Ala	Gln	Leu	Leu	Ser

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145          150          155          160
Lys Leu Ser Val Leu Leu Leu Glu Lys Met Gly Gly Ser Ser Gly Ala
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          180          185          190
Thr Ser Leu Pro Ala Trp Ser Ala Ala Met Asp Ala Gly Leu Glu Ala
          195          200          205
Met Gln Lys Tyr Gly Lys Ala Ala Pro Gly Asp Arg Thr Met Leu Asp
          210          215          220
Ser Leu Trp Ala Ala Glu Gln Glu Leu Gln Ala Trp Lys Ser Pro Gly
225          230          235          240
Ala Asp Leu Leu Gln Val Leu Thr Lys Ala Val Lys Ser Ala Glu Ala
          245          250          255
Ala Ala Glu Ala Thr Lys Asn Met Glu Ala Gly Ala Gly Arg Ala Ser
          260          265          270
Tyr Ile Ser Ser Ala Arg Leu Glu Gln Pro Asp Pro Gly Ala Val Ala
          275          280          285
Ala Ala Ala Ile Leu Arg Ala Ile Leu Glu Val Leu Gln Ser
          290          295          300

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&lt;210&gt; 4697

&lt;211&gt; 1047

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4697

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120
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180
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240
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300
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420
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480
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720
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840

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<210> 4698

<211> 182

<212> PRT

<213> Homo sapiens

<400> 4698

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Thr	Asp	Gly	Thr	Val	Phe	Arg	Ile	His	Thr	Lys	Ala	Glu	Gly	Phe	Met
			20					25					30		
Asp	Ala	Asp	Ile	Pro	Leu	Glu	Leu	Val	Phe	His	Leu	Pro	Val	Asn	Tyr
		35					40					45			
Pro	Ser	Cys	Leu	Pro	Gly	Ile	Ser	Ile	Asn	Ser	Glu	Gln	Leu	Thr	Arg
	50					55					60				
Ala	Gln	Cys	Val	Thr	Val	Lys	Glu	Lys	Leu	Leu	Glu	Gln	Ala	Glu	Ser
65					70				75					80	
Leu	Leu	Ser	Glu	Pro	Met	Val	His	Glu	Leu	Val	Leu	Trp	Ile	Gln	Gln
				85				90						95	
Asn	Leu	Arg	His	Ile	Leu	Ser	Gln	Pro	Glu	Thr	Gly	Ser	Gly	Ser	Glu
			100					105					110		
Lys	Cys	Thr	Phe	Ser	Thr	Ser	Thr	Thr	Met	Asp	Asp	Gly	Leu	Trp	Ile
		115					120					125			
Thr	Leu	Leu	His	Leu	Asp	His	Met	Arg	Ala	Lys	Thr	Lys	Tyr	Val	Lys
	130					135					140				
Ile	Val	Glu	Lys	Trp	Ala	Ser	Asp	Leu	Arg	Leu	Thr	Gly	Arg	Leu	Met
145					150					155				160	
Phe	Met	Gly	Lys	Ile	Ile	Leu	Ile	Leu	Leu	Gln	Gly	Asp	Arg	Asn	Asn
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Leu	Lys	Val	Pro	Lys	Ser										
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<210> 4699

<211> 1441

<212> DNA

<213> Homo sapiens

<400> 4699

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 180  
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 420  
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 480  
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 660  
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 1441

<210> 4700

<211> 116

<212> PRT

<213> Homo sapiens

<400> 4700

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Ser	Thr	Arg	Gly	Gln	Ser	Lys	Thr	Gly	Trp	Lys	Leu	Pro	Val	Thr	Leu
			20					25				30			
Ile	Cys	Cys	Pro	Arg	His	Pro	Leu	Met	Arg	Leu	Lys	Leu	Gly	Pro	Ser



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      1             5             10             15
Asp Pro Pro Thr Ser Ala Ser Glu Asn Ala Gly Ile Thr Gly Leu Ser
      20             25             30
His Xaa Pro Pro Gly His Phe Phe Leu Glu Thr Arg Ser Tyr Ser Leu
      35             40             45
Ala Lys Asn Gly Val Gln Trp Cys Asn Val Gly Ser Leu Gln Pro Lys
      50             55             60
Pro Pro Gly Leu Lys
65

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&lt;210&gt; 4703

&lt;211&gt; 513

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4703

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120
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180
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240
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&lt;210&gt; 4704

&lt;211&gt; 112

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4704

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Met Ala Ala Pro Glu Gln Pro Leu Ala Ile Ser Arg Gly Cys Thr Ser
      1             5             10             15
Ser Ser Ser Leu Ser Pro Pro Arg Ala Asp Arg Thr Leu Leu Val Arg
      20             25             30
His Leu Pro Ala Glu Leu Thr Ala Glu Glu Lys Glu Asp Leu Leu Lys
      35             40             45
Tyr Phe Gly Ala Gln Ser Val Arg Val Leu Ser Asp Lys Gly Arg Leu
      50             55             60
Lys His Thr Ala Phe Ala Thr Phe Pro Asn Glu Lys Ala Ala Ile Lys
      65             70             75             80
Ala Leu Thr Arg Leu His Gln Leu Lys Leu Leu Gly His Thr Leu Val
      85             90             95
Val Glu Phe Ala Lys Glu Gln Asp Arg Val His Ser Pro Cys Pro Thr

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100

105

110

<210> 4705  
 <211> 569  
 <212> DNA  
 <213> Homo sapiens

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 180  
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 240  
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 300  
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 420  
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 480  
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 569

<210> 4706  
 <211> 154  
 <212> PRT  
 <213> Homo sapiens

<400> 4706  
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 20 25 30  
 Thr Glu Leu Arg Glu Tyr Phe Lys Lys Phe Gly Val Val Thr Glu Val  
 35 40 45  
 Val Met Ile Tyr Asp Ala Glu Lys Gln Arg Pro Arg Gly Lys Gly Arg  
 50 55 60  
 Ser Ser Leu Thr Ser Ala Phe Ser Leu Leu Leu Pro Gln Met Ala Asn  
 65 70 75 80  
 Tyr Leu Thr Arg Gln Ala His Thr Gly Gly Gly Cys Ser Lys Gln Pro  
 85 90 95  
 Gln Glu Gly Thr Ile Trp Arg Gln Met Thr Lys Thr Trp Ala Pro His  
 100 105 110  
 Val His Pro Ile Gln Pro Val Cys Ala Ser Arg Gly Gln Thr Ser His  
 115 120 125  
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 130 135 140  
 Leu Gly Leu Ala Ser Val Phe His Cys Pro

145

150

<210> 4707  
 <211> 748  
 <212> DNA  
 <213> Homo sapiens

<400> 4707  
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<210> 4708  
 <211> 128  
 <212> PRT  
 <213> Homo sapiens

<400> 4708  
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 Ser Ser Ser Leu Ser Pro Pro Arg Gly Asp Arg Thr Leu Leu Val Arg  
 20 25 30  
 His Leu Pro Ala Glu Leu Thr Ala Glu Glu Lys Glu Asp Leu Leu Lys  
 35 40 45  
 Tyr Phe Gly Ala Gln Ser Val Arg Val Leu Ser Asp Lys Gly Arg Leu  
 50 55 60  
 Lys His Thr Ala Phe Ala Thr Phe Pro Asn Glu Lys Ala Ala Ile Lys  
 65 70 75 80  
 Ala Leu Thr Arg Leu His Gln Leu Lys Leu Leu Gly His Thr Leu Val  
 85 90 95  
 Val Glu Phe Ala Lys Glu Gln Asp Arg Val His Ser Pro Cys Pro Thr

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Ser Gly Ser	Glu Lys Lys Lys Met Ser Asp Asp Pro Val Glu Asp Asp				
	115		120		125

&lt;210&gt; 4709

&lt;211&gt; 1351

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4709

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 120  
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 180  
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 480  
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 720  
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 1260  
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1351

<210> 4710  
<211> 304  
<212> PRT  
<213> Homo sapiens

<400> 4710  
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Tyr Gly Glu Val Val Asp Cys Val Ile Met Lys Asp Lys Thr Thr Asn  
35 40 45  
Gln Ser Arg Gly Phe Gly Phe Val Lys Phe Lys Asp Pro Asn Cys Val  
50 55 60  
Gly Thr Val Leu Ala Ser Arg Pro His Thr Leu Asp Gly Arg Asn Ile  
65 70 75 80  
Asp Pro Lys Pro Cys Thr Pro Arg Gly Met Gln Pro Glu Arg Thr Arg  
85 90 95  
Pro Lys Glu Gly Trp Gln Lys Gly Pro Arg Ser Asp Asn Ser Lys Ser  
100 105 110  
Asn Lys Ile Phe Val Gly Gly Ile Pro His Asn Cys Gly Glu Thr Glu  
115 120 125  
Leu Arg Glu Tyr Phe Lys Lys Phe Gly Val Val Thr Glu Val Val Met  
130 135 140  
Ile Tyr Asp Ala Glu Lys Gln Arg Pro Arg Gly Phe Gly Phe Ile Thr  
145 150 155 160  
Phe Glu Asp Glu Gln Ser Val Asp Gln Ala Val Asn Met His Phe His  
165 170 175  
Asp Ile Met Gly Lys Lys Val Glu Val Lys Arg Ala Glu Pro Arg Asp  
180 185 190  
Ser Lys Ser Gln Ala Pro Gly Gln Pro Gly Ala Ser Gln Trp Gly Ser  
195 200 205  
Arg Val Val Pro Asn Ala Ala Asn Gly Trp Ala Gly Gln Pro Pro Pro  
210 215 220  
Thr Trp Gln Gln Gly Tyr Gly Pro Gln Gly Met Trp Val Pro Ala Gly  
225 230 235 240  
Gln Ala Ile Gly Gly Tyr Gly Pro Pro Pro Ala Gly Arg Gly Ala Pro  
245 250 255  
Pro Pro Pro Pro Phe Thr Ser Tyr Ile Val Ser Thr Pro Pro Gly  
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<210> 4711  
<211> 2061  
<212> DNA  
<213> Homo sapiens

<400> 4711

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 <211> 187  
 <212> PRT  
 <213> Homo sapiens

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 Pro Met Ala Ala Pro Glu Gly Lys Arg Ser Leu Ala Asn Gly Pro Asn  
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 Asp Glu Gly Glu Glu Phe Asp Asp Trp Glu Asp Asp Tyr Asp Tyr Pro  
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 <213> Homo sapiens

<400> 4713

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&lt;210&gt; 4714

&lt;211&gt; 145

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4714

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Val Gln Val Val Gly Arg Ala Phe Ala Arg Ala Leu Arg Gln Glu Phe
      35           40           45
Ala Ala Ser Arg Ala Ala Ala Asp Ala Arg Gly Arg Ala Gly His Arg
      50           55           60
Ser Ala Ala Ala Ser Asn Leu Ser Gly Leu Ser Leu Gln Glu Ala Gln
      65           70           75           80
Gln Ile Leu Asn Val Ser Lys Leu Ser Pro Glu Glu Val Gln Lys Asn
      85           90           95
Tyr Glu His Leu Phe Lys Val Asn Asp Lys Ser Val Gly Gly Ser Phe
      100          105          110
Tyr Leu Gln Ser Lys Val Val Arg Ala Lys Glu Arg Leu Asp Glu Glu
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Leu Lys Ile Gln Ala Gln Glu Asp Arg Glu Lys Gly Gln Met Pro His
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145

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 <213> Homo sapiens

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840

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&lt;210&gt; 4716

&lt;211&gt; 239

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4716

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			20					25				30			
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Leu Leu Tyr Gln Lys Phe Val Lys Met Ala Thr Leu Thr Ser Gly Gly
      85      90      95
Glu Lys Pro Asn Lys Asp Leu Glu Ser Cys Ser Asp Asp Asp Asn Gln
      100      105      110
Gly Ser Lys Ser Pro Lys Ile Leu Thr Asp Glu Met Leu Leu Gln Ala
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Cys Glu Gly Arg Thr Ala His Lys Ala Ala Arg Leu Gly Ile Thr Met
      130      135      140
Lys Ala Lys Leu Ala Arg Leu Glu Ala Gln Glu Gln Ala Phe Leu Ala
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Arg Leu Lys Gly Gln Asp Pro Gly Ala Pro Gln Leu Gln Ser Glu Ser
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Lys Pro Pro Lys Lys Lys Lys Lys Arg Arg Gln Lys Glu Glu Glu
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Glu Ala Thr Ala Ser Glu Arg Asn Asp Ala Asp Glu Lys His Pro Glu
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Gln Glu Gly Lys Val Ser Asp Glu Arg Glu Gly Thr Thr Lys Glu
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&lt;210&gt; 4717

&lt;211&gt; 2753

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4717

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<211> 259

<212> PRT

<213> Homo sapiens

<400> 4718

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Arg	Glu	Glu	Glu	Glu	Glu	Asn	Asp	Asp	Asn	Ser	Leu	Glu	Gly	Glu	
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Thr	Phe	Pro	Leu	Glu	Arg	Asp	Glu	Val	Met	Pro	Pro	Pro	Leu	Gln	His
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Pro	Gln	Thr	Asp	Arg	Leu	Thr	Cys	Pro	Lys	Gly	Leu	Pro	Trp	Ala	Pro
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Lys	Val	Arg	Glu	Lys	Asp	Ile	Glu	Met	Phe	Leu	Glu	Ser	Ser	Arg	Ser
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Lys	Phe	Ile	Gly	Tyr	Thr	Leu	Gly	Ser	Asp	Thr	Asn	Thr	Val	Val	Gly
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Leu	Pro	Arg	Pro	Ile	His	Glu	Ser	Ile	Lys	Thr	Leu	Lys	Gln	His	Lys
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Tyr	Thr	Ser	Ile	Ala	Glu	Val	Gln	Ala	Gln	Met	Lys	Glu	Glu	Tyr	Leu
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		180				185						190			
Ala	Leu	Leu	Lys	Ile	Leu	Leu	Ala	Ala	Ala	Pro	Thr	Ser	Lys	Ala	Lys
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Thr	Asp	Ser	Ile	Asn	Ile	Leu	Ala	Asp	Val	Leu	Pro	Glu	Glu	Met	Pro
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Thr	Thr	Val	Leu	Gln	Ser	Met	Lys	Leu	Gly	Val	Asp	Val	Asn	Arg	His
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Lys His Phe

<210> 4719  
 <211> 589  
 <212> DNA  
 <213> Homo sapiens

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<210> 4720  
 <211> 196  
 <212> PRT  
 <213> Homo sapiens

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 Glu Lys Asp Pro Asp Gly Cys Tyr Arg Leu Val Asp Tyr Leu Glu Gly  
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 65 70 75 80  
 Val Thr Gly Lys Gly Gly Leu Thr Gln Asp Leu Lys Ala Ala Ala Arg  
 85 90 95  
 Cys Phe Leu Met Ala Cys Glu Lys Pro Gly Lys Lys Ser Ile Ala Ala  
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 Cys His Asn Val Gly Leu Leu Ala His Asp Gly Gln Val Asn Glu Asp  
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145	150	155	160		
Gln Gly Ala Pro Gly Phe	Pro Lys Asp Met Asp	Leu Ala Cys Lys Tyr			
	165	170	175		
Ser Met Lys Ala Cys Asp	Leu Gly His Ile Trp	Ala Cys Ala Asn Ala			
	180	185	190		
Ser Arg Met Tyr					
195					

&lt;210&gt; 4721

&lt;211&gt; 1385

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4721

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420
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480
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600
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660
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720
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1140

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 1385

<210> 4722

<211> 285

<212> PRT

<213> Homo sapiens

<400> 4722

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		20					25					30			
Leu	Leu	His	Gly	Thr	Pro	Asp	Gln	Lys	Arg	Lys	Leu	Ile	Arg	Glu	Cys
		35				40					45				
Leu	Thr	Gly	Glu	Ser	Glu	Ser	Ser	Glu	Asp	Glu	Phe	Glu	Lys	Glu	
	50				55				60						
Met	Glu	Ala	Glu	Leu	Asn	Ser	Thr	Met	Lys	Thr	Met	Glu	Asp	Lys	Leu
65				70				75					80		
Ser	Ser	Leu	Gly	Thr	Gly	Ser	Ser	Ser	Gly	Asn	Gly	Lys	Val	Ala	Thr
			85					90					95		
Ala	Pro	Thr	Arg	Tyr	Tyr	Asp	Asp	Ile	Tyr	Phe	Asp	Ser	Asp	Ser	Glu
		100					105						110		
Asp	Glu	Asp	Arg	Ala	Val	Gln	Val	Thr	Lys	Lys	Lys	Lys	Lys	Lys	Gln
		115					120						125		
His	Lys	Ile	Pro	Thr	Asn	Asp	Glu	Leu	Leu	Tyr	Asp	Pro	Glu	Lys	Asp
	130					135					140				
Asn	Arg	Asp	Gln	Ala	Trp	Val	Asp	Ala	Gln	Arg	Arg	Gly	Tyr	His	Gly
145			150					155						160	
Leu	Gly	Pro	Gln	Arg	Ser	Arg	Gln	Gln	Gln	Pro	Val	Pro	Asn	Ser	Asp
			165					170						175	
Ala	Val	Leu	Asn	Cys	Pro	Ala	Cys	Met	Thr	Thr	Leu	Cys	Leu	Asp	Cys
		180					185					190			
Gln	Arg	His	Glu	Ser	Tyr	Lys	Thr	Gln	Tyr	Arg	Ala	Met	Phe	Val	Met
	195					200						205			
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	210				215						220				
Asn	Arg	Lys	Lys	Arg	Arg	Val	His	Lys	Lys	Met	Arg	Ser	Asn	Arg	Glu
225				230						235				240	
Asp	Ala	Ala	Glu	Lys	Ala	Glu	Thr	Asp	Val	Glu	Glu	Ile	Tyr	His	Pro
			245					250						255	
Val	Met	Cys	Thr	Glu	Cys	Ser	Thr	Glu	Val	Ala	Val	Tyr	Asp	Lys	Asp
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<211> 1213  
<212> DNA  
<213> Homo sapiens

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240  
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720  
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1213

<210> 4724  
<211> 54  
<212> PRT  
<213> Homo sapiens



&lt;400&gt; 4724

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Val Gly Val Pro Val Gly Trp Gly Gly Glu Trp Gly Glu Pro Thr Pro
          20           25           30
Gly Pro Pro Ser Pro Phe Pro Arg Gln Ser Pro Phe Gly Leu Asn Pro
          35           40           45
Phe Leu Pro Ala Gly Asp
          50

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&lt;210&gt; 4725

&lt;211&gt; 366

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4725

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180
tgttctcacg tgtgtacctg cntctcttgc ccatgcntgt acgtgcacac gtgcctctgt
240
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360
acgcgt
366

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&lt;210&gt; 4726

&lt;211&gt; 122

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 4726

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Xaa Phe Leu Glu Gly Glu Leu Gly Arg Ser Arg Arg Thr Pro Ala Gly
 1           5           10           15
Gly Arg Gly Ala Met Leu Ala Ile Asp Thr Ala Ser Asp Ile Leu Ala
          20           25           30
His Val His Val Tyr Ser Arg Leu Cys Ala Cys Ala Arg Val Tyr Met
          35           40           45
His Met Cys Thr Gly Ala Cys Ala Cys Val Asn Thr Cys Ser His Val
          50           55           60
Cys Thr Cys Xaa Ser Cys Pro Cys Xaa Tyr Val His Thr Cys Leu Cys
          65           70           75           80
Met His Ala Cys Ile Ala Val Cys Pro Tyr Pro His Val Arg Ile His
          85           90           95
Met Arg Leu Cys Leu His Leu Cys Met His Ala Ser Val Leu Leu Arg
          100          105          110
Ala Trp Val Cys Ile Cys Ala Cys Thr Arg
          115          120

```

&lt;210&gt; 4727

&lt;211&gt; 2031

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4727

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1440

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 1680  
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<210> 4728

<211> 328

<212> PRT

<213> Homo sapiens

<400> 4728

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			20				25						30		
Gln	Trp	Asp	Ser	Asp	Glu	Pro	Ile	Pro	Ala	Lys	Glu	Leu	Glu	Arg	Gly
	35					40						45			
Val	Ala	Gly	Ala	His	Gly	Leu	Leu	Cys	Leu	Leu	Ser	Asp	His	Val	Asp
	50				55						60				
Lys	Arg	Ile	Leu	Asp	Ala	Gly	Ala	Asn	Leu	Lys	Val	Ile	Ser	Thr	
65				70				75						80	
Met	Ser	Val	Gly	Ile	Asp	His	Leu	Ala	Leu	Asp	Glu	Ile	Lys	Lys	Arg
			85					90						95	
Gly	Ile	Arg	Val	Gly	Tyr	Thr	Pro	Asp	Val	Leu	Thr	Asp	Thr	Thr	Ala
			100					105						110	
Glu	Leu	Ala	Val	Ser	Leu	Leu	Leu	Thr	Thr	Cys	Arg	Arg	Leu	Pro	Glu
			115				120						125		
Ala	Ile	Glu	Glu	Val	Lys	Asn	Gly	Gly	Trp	Thr	Ser	Trp	Lys	Pro	Leu
			130				135						140		
Trp	Leu	Cys	Gly	Tyr	Gly	Leu	Thr	Gln	Ser	Thr	Val	Gly	Ile	Ile	Gly
145					150					155				160	
Leu	Gly	Arg	Ile	Gly	Gln	Ala	Ile	Ala	Arg	Arg	Leu	Lys	Pro	Phe	Gly
			165						170					175	
Val	Gln	Arg	Phe	Leu	Tyr	Thr	Gly	Arg	Gln	Pro	Arg	Pro	Glu	Glu	Ala
			180					185						190	
Ala	Glu	Phe	Gln	Ala	Glu	Phe	Val	Ser	Thr	Pro	Glu	Leu	Ala	Ala	Gln
			195					200					205		
Ser	Asp	Phe	Ile	Val	Val	Ala	Cys	Ser	Leu	Thr	Pro	Ala	Thr	Glu	Gly

210	215	220
Leu Cys Asn Lys Asp Phe Phe Gln Lys Met Lys Glu Thr Ala Val Phe		
225	230	235
Ile Asn Ile Ser Arg Gly Asp Val Val Asn Gln Asp Asp Leu Tyr Gln		240
	245	250
Ala Leu Ala Ser Gly Lys Ile Ala Ala Ala Gly Leu Asp Val Thr Ser		255
	260	265
Pro Glu Pro Leu Pro Thr Asn His Pro Leu Leu Thr Leu Lys Asn Cys		270
	275	280
Val Ile Leu Pro His Ile Gly Ser Ala Thr His Arg Thr Arg Asn Thr		285
	290	295
Met Ser Leu Leu Ala Ala Asn Asn Leu Leu Ala Gly Leu Arg Gly Glu		300
305	310	315
Pro Met Pro Ser Glu Leu Lys Leu		320
	325	

&lt;210&gt; 4729

&lt;211&gt; 753

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 4729

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 753

&lt;210&gt; 4730

&lt;211&gt; 148

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens